

No.



# THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

**J. R. Simplot Company**

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HERETO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC DEPOSIT OF Viable BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR PURCHASING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE PURPOSES, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

BLUEGRASS, KENTUCKY

'Perfection'

In Testimony Whereof, I have hereunto set my hand  
and caused the seal of the Plant Variety  
Protection Office to be affixed at the City of  
Washington, D.C. this fifteenth day of April, in  
the year two thousand and eight.

Attest:

Commissioner  
Plant Variety Protection Office  
Agricultural Marketing Service

Agriculture

U.S. DEPARTMENT OF AGRICULTURE AGRICULTURAL MARKETING SERVICE SCIENCE AND TECHNOLOGY - PLANT VARIETY PROTECTION OFFICE <b>APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE</b> <small>(Instructions and information collection burden statement on reverse)</small>	
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The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF OWNER <b>J.R.</b> <b>J.R. Simplot Company</b> <small>(ST: 10/1/2007)</small>		2. TEMPORARY DESIGNATION OR EXPERIMENTAL NAME <b>J-1515, 93-1515</b>	3. VARIETY NAME <b>Perfection</b>
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code, and Country)  <b>W. 5300 Riverbend Ave. Post Falls, ID 83854</b>		5. TELEPHONE (Include area code) <b>208-773-7581</b>	FOR OFFICIAL USE ONLY <b>PVPO NUMBER</b> <b>200300008</b>
		6. FAX (Include area code) <b>208-773-4846</b>	FILING DATE <b>10/15/2002</b>
7. IF THE OWNER NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION (corporation, partnership, association, etc.) <b>Corporation</b>	8. IF INCORPORATED, GIVE STATE OF INCORPORATION <b>Nevada</b>	9. DATE OF INCORPORATION <b>June 28, 1955</b>	
10. NAME AND ADDRESS OF OWNER REPRESENTATIVE(S) TO SERVE IN THIS APPLICATION. (First person listed will receive all papers)  <b>A. Douglas Brede W. 5300 Riverbend Ave. Post Falls, ID 83854</b>			
FILING AND EXAMINATION FEES: <b>\$ 2,705.00</b> <small>FEES RECEIVED DATE 10/15/2002</small> CERTIFICATION FEE: <b>\$ 768.00</b> <small>DATE 3/11/2008</small>			
11. TELEPHONE (Include area code) <b>208-773-7581</b>	12. FAX (Include area code) <b>208-773-4846</b>	13. E-MAIL <b>dbrede@simplot.com</b>	14. CROP KIND (Common Name) <b>Kentucky bluegrass</b>
15. GENUS AND SPECIES NAME OF CROP <b>Poa pratensis</b>		16. FAMILY NAME (Botanical) <b>Gramineae</b>	17. IS THE VARIETY A FIRST GENERATION HYBRID? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
18. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow instructions on reverse)		19. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE SOLD AS A CLASS OF CERTIFIED SEED? See Section 83(a) of the Plant Variety Protection Act) <input type="checkbox"/> YES (If "yes", answer items 20 and 21 below) <input checked="" type="checkbox"/> NO (If "no", go to item 22)	
a. <input checked="" type="checkbox"/> Exhibit A. Origin and Breeding History of the Variety b. <input checked="" type="checkbox"/> Exhibit B. Statement of Distinctness c. <input checked="" type="checkbox"/> Exhibit C. Objective Description of Variety d. <input checked="" type="checkbox"/> Exhibit D. Additional Description of the Variety (Optional) e. <input checked="" type="checkbox"/> Exhibit E. Statement of the Basis of the Owner's Ownership f. <input checked="" type="checkbox"/> Voucher Sample (2,500 viable untreated seeds or, for tuber propagated varieties, verification that tissue culture will be deposited and maintained in an approved public repository) g. <input checked="" type="checkbox"/> Filing and Examination Fee (\$2,705), made payable to "Treasurer of the United States" (Mail to the Plant Variety Protection Office)		20. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF CLASSES? <input type="checkbox"/> YES <input type="checkbox"/> NO IF YES, WHICH CLASSES? <input type="checkbox"/> FOUNDATION <input type="checkbox"/> REGISTERED <input type="checkbox"/> CERTIFIED	
		21. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS? <input type="checkbox"/> YES <input type="checkbox"/> NO IF YES, SPECIFY THE <input type="checkbox"/> FOUNDATION <input type="checkbox"/> REGISTERED <input type="checkbox"/> CERTIFIED NUMBER 1,2,3, etc. <small>(If additional explanation is necessary, please use the space indicated on the reverse.)</small>	
22. HAS THE VARIETY (INCLUDING ANY HARVESTED MATERIAL) OR A HYBRID PRODUCED FROM THIS VARIETY BEEN SOLD, DISPOSED OF, TRANSFERRED, OR USED IN THE U. S. OR OTHER COUNTRIES? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		23. IS THE VARIETY OR ANY COMPONENT OF THE VARIETY PROTECTED BY INTELLECTUAL PROPERTY RIGHT (PLANT BREEDER'S RIGHT OR PATENT)? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
		<small>IF YES, PLEASE GIVE COUNTRY, DATE OF FILING OR ISSUANCE AND ASSIGNED REFERENCE NUMBER. (Please use space indicated on reverse.)</small>	
24. The owners declare that a viable sample of basic seed of the variety will be furnished with application and will be replenished upon request in accordance with such regulations as may be applicable, or for a tuber propagated variety a tissue culture will be deposited in a public repository and maintained for the duration of the certificate. The undersigned owner(s) is(are) the owner of this sexually reproduced or tuber propagated plant variety, and believe(s) that the variety is new, distinct, uniform, and stable as required in Section 42, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act. Owner(s) is(are) informed that false representation herein can jeopardize protection and result in penalties.			
SIGNATURE OF OWNER 		SIGNATURE OF OWNER	
NAME (Please print or type) <b>A. Douglas Brede</b>		NAME (Please print or type)	
CAPACITY OR TITLE <b>Research Director</b>	DATE <b>5 Oct. 02</b>	CAPACITY OR TITLE	DATE

**Exhibit 16A****Origin and Breeding History**  
**Perfection Kentucky Bluegrass**

'Perfection' Kentucky bluegrass originated as a highly apomictic, single-plant selection from hybrid cross number 89-1037, made in the field in July, 1989. Pollen from the cultivar 'Midnight' Kentucky bluegrass was used to pollinate plants of 'Limousine.' Seed harvested from the Limousine mother plants was individually sown into cells of greenhouse flats during the spring of 1992. The resulting plants were grown in a spaced-plant field nursery of 40,701 plants in May. Offspring with characteristics dissimilar to Limousine, the female parent, were flagged during maturation in spring of 1993. Plant number 93-1515 (the experimental designation for Perfection) was identified as being different from Limousine by its seedhead characteristics. It produced 23.8 grams of seed from a single spaced plant, which is slightly more than typical for a bluegrass spaced plant in North Idaho.

Seed harvested from experimental 93-1515 was tested in Jacklin turf quality trials in Idaho in 1993. It was tested in Ohio in 1996, New Jersey in 1994, Maryland in 1994, and in national (NTEP) trials in 2000. It was evaluated in Idaho at both 1½ inch and ½ inch mowing, and in Maryland at 2 inch and 3/8 inch mowing. Its seed yielding ability was evaluated in a replicated yield trial in Post Falls in 1998 and in a small production block near Connell, WA, seeded in 1998. Perfection was selected for release based on a combination of its US East Coast turf performance, combined with reliable seed yield in the Pacific Northwest. First breeder seed was produced in 1998 and first certified seed in 2001, although none was sold until release in Fall 2002.

Progeny trials were conducted in spaced-plant nurseries, established near Post Falls, ID, in May 1998, to determine the level of apomixis. Of 1230 J-1515 plants, 3.7% were variants in the vegetative (pre-heading) stage, 1.8% were heading maturity variants, 1.2% seedhead variants, 0% miniature plants, and 0% were headless plants. J-1515 averaged 94% apomictic, with a 95% confidence interval from 92 to 97%. In commercial seed production, apomixis will typically vary from 90 to 99% depending upon weather, location, and year.

Perfection Kentucky bluegrass is a stable and uniform cultivar. Over seven years of commercial seed production, all seedlots evaluated have produced turf of comparable quality and acceptable uniformity. Aberrant progeny (as described in the previous paragraph) are rogued from breeders, foundation, and registered fields to insure continued uniformity and stability, but they will continue to occur in every generation.

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Exhibit 16 B

**Statement of Distinctness**  
**Perfection Kentucky Bluegrass**

'Perfection' is a dark green, medium-tall strawed Kentucky bluegrass. Perfection can be distinguished from all other varieties by the combination of spaced-plant, seed, and turf characteristics described in Tables 1 through 10. Perfection most closely resembles 'Quantum Leap' Kentucky bluegrass but differs from it in the following characters:

1. Perfection has a significantly longer culm length than Quantum Leap (66.7 cm for Perfection vs. 60.0 cm for Quantum Leap in 1999, significant at 0.001 level; 53.9 cm for Perfection vs. 51.2 cm for Quantum Leap in 2000, significant at 0.001 level) (Table 1).
2. Perfection has a significantly longer length-to-width ratio of its second subtending leaf than Quantum Leap (ratio of 25.6:1 for Perfection vs. 21.5:1 for Quantum Leap in 1999, significant at 0.001 level; ratio of 52.8:1 for Perfection vs. 37.4:1 for Quantum Leap in 2000, significant at 0.001 level) (Table 3).
3. Perfection has a significantly longer length of its lowest panicle internode than Quantum Leap (2.21 cm for Perfection vs. 2.05 cm for Quantum Leap in 1999, significant at 0.001 level; 1.66 cm for Perfection vs. 1.44 cm for Quantum Leap in 2000, significant at 0.001 level) (Table 4).
4. Perfection has a significantly longer culm length measured from the ground to the flagleaf node than Quantum Leap (26.8 cm for Perfection vs. 20.5 cm for Quantum Leap in 1999, significant at 0.001 level; 31.2 cm for Perfection vs. 28.5 cm for Quantum Leap in 2000, significant at 0.001 level) (Table 5).
5. Perfection has a significantly earlier reproductive maturity than Quantum Leap on June 7<sup>th</sup> in unmowed seed production plots (a rating of 6.6 for Perfection vs. 5.4 for Quantum Leap in 1999, significant at 0.05 level; a rating of 6.7 for Perfection vs. 6 for Quantum Leap in 2000, significant at 0.05 level) (Table 7).
6. Perfection had significantly better turfgrass quality across the locations of IA1, IL2, KY1, MN1, MO1, NC1, NE2, NJ2, OK1, PA1, RI1, VA1, WA1, and WA3 in National testing, representing the "Schedule B" with 1-2 inch mowing, 3-4 lbs. nitrogen per 1000 ft<sup>2</sup> per year, and irrigation to prevent dormancy (rating of 6.2 for Perfection versus 5.9 for Quantum Leap, significant at 0.05 level) (Table 8, NTEP 2001 results).
7. Perfection had significantly better turfgrass quality across the locations of MA1, ME1, NJ1, NJ2, NY1, PA1, and RI1 in National testing, representing the "Northeast" region (rating of 6.8 for Perfection versus 6.4 for Quantum Leap, significant at 0.05 level) (Table 9, NTEP 2001 results).
8. Perfection had significantly better seedling vigor across the locations of CO1, IA1, IL2, IL3, MA1, MD1, MI1, MN1, MO1, NE1, NE2, NJ1, NJ2, NY1, PA1, SD1, WA3, and WY1 in National testing (rating of 5.6 for Perfection versus 5.1 for Quantum Leap, significant at 0.05 level) (Table 10, NTEP 2001 results).

U.S. DEPARTMENT OF AGRICULTURE  
AGRICULTURAL MARKETING SERVICE  
PLANT VARIETY PROTECTION OFFICE  
BELTSVILLE, MARYLAND 20705  
**OBJECTIVE DESCRIPTION OF VARIETY**  
**BLUEGRASS (*Poa spp*)**

Exhibit 16C  
(*Bluegrass*)

NAME OF APPLICANT(S) <b>J.R. Simplot Company</b>	VARIETY NAME OR TEMPORARY DESIGNATION <b>Perfection</b>
ADDRESS (Street and no., or R.F.D. No., City State and ZIP Code) <b>(B) 10/1/2007 W. 5300 Riverbend Ave. Post Falls, Idaho 83854</b>	FOR OFFICIAL USE ONLY <b>PVPO NUMBER #200300008</b>

Place the appropriate number that describes the Varietal character of this variety in the boxes below. Use leading zeros when necessary (e.g., 089 or 09). Characteristics described including numerical measurements, should represent those that are typical for the variety. Measured data should be for SPACED PLANTS. Royal Horticultural Society or any recognized color fan may be used to determine plant colors; designate system used; 1-9 rating scale, where mentioned. Describe location of test area, conditions and number of plants used: Rathdrum, ID, 20-60 plants/cultivar x 3 reps: The symbol "▲" indicates decimal. Location of the test area: Farm near Rathdrum, Idaho

**1. SPECIES: (With comparison varieties for use below - use varieties within species of application variety)**

<b>2</b>	1= <i>Poa compressa</i>	2= <i>P. pratensis</i>	3= <i>P. trivialis</i>	4= Other (specify) _____
	Chromosome Number			

**2. ADAPTATION: ( 0= Not tested; 1= Not Adapted; 2= Adapted)**

<b>2</b>	Northeast	<b>2</b>	Transitional zone	<b>1</b>	Southeast	<b>2</b>	North Central
<b>2</b>	Pacific N.W.	<b>2</b>	Intermountain	<b>2</b>	Southwest (CA., AZ.)		Other (specify) _____

**3. Maturity: (At first anthesis): Give test area Rathdrum, ID**

★ **5** Maturity Class:

1= Very Early                    2 = Early (Delta, Mystic)                    3= Medium Early (Fylking, Nugget)  
4= Medium Late (Newport, Adelphi, Aquila)    5 = Late (Merion, Baron, Enmundi)    6 = Very Late(Pacific)

**June 1** Date of First Anthesis

<b>3</b>	Number of days earlier than	★ <b>11</b> 1=Nugget      2=Fylking      3=Delta      10= Quantum Leap
	Maturity same as	★ <b>10</b> 4=Merion      5=Newport      6=Baron      11=Midnight
<b>5</b>	Number of days later than	★ <b>6</b> 7=Mystic      8=Sabre      9=Reubens      12=Absolute

**4. PLANT HEIGHT: (At maturity; Average of longest shoot of 10 plants from soil surface to top of panicle) Test area Rathdrum, Idaho**

★ **4**  
1= Short (Nugget)      2 = Medium short (Baron, Fylking, Mystic)  
3= Medium Tall (Merion, Adelphi)    4= Tall (Delta)    5 = Very Tall

<b>6</b> <b>6▲</b> <b>7</b>	cm Height	★ <b>11</b> 1=Nugget      2=Fylking      3=Delta      10= Quantum Leap
<b>▲</b> <b>6</b> <b>7</b>	cm Shorter than	★ <b>12</b> 4=Merion      5=Newport      6=Baron      11=Midnight
<b>2</b> <b>6▲</b> <b>7</b>	Height same as	★ <b>6</b> 7=Mystic      8=Sabre      9=Reubens      12=Absolute
<b>2</b> <b>6▲</b> <b>7</b>	cm Taller than	

**5. GROWTH HABIT:**

★ **2**      3 = Prostrate (Nugget)      2 = Semi-prostrate (Merion)      1 = Erect (Delta)

**2** **2** **4** cm Amount of spread by rhizomes in 1 year (give test area Rathdrum, Idaho.)

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## 6. LEAF BLADE:

★ <input type="checkbox"/> 4	Green Color	1 = Light Green (Mystic)	2 = Medium Green (Fylking, Bonnieblue)
		3 = Moderately dk. green (Merion, Adelphi)	4 = Very dk. green (Nugget, Glade, Enmundi)
★ <input type="checkbox"/> 3	Bluegreen Color	1 = Not bluegreen (Mystic, Touchdown, Parade)	2 = Moderately bluegreen (Merion, A-34)
		3 = Bluegreen (Nugget, Enmundi, Adelphi)	4 = Strongly bluegreen (Majestic)
★ <input type="checkbox"/> 1	Winter color	1 = Light green	2 = Dark green
		4 = Dark purple	3 = Light purple
			5 = Not purple
			6 = Not green or purple

★ <input type="checkbox"/> 1	Hairs upper side:	1 = Absent (Nugget)	2 = Sparse (Merion)	3 = Dense (Park)
	Hairs lower side:	1 = Absent (Fylking, Merion)	2 = Sparse	3 = Dense (Nugget)
★ <input type="checkbox"/> 2	Luster upper side:	1 = Shiny (Eclipse, Enmundi)	2 = Dull (Aquila, Parade)	
★ <input type="checkbox"/> 2	Luster lower side:	1 = Shiny (Mystic, Enmundi)	2 = Dull (Barvie, Eclipse)	
★ <input type="checkbox"/> 1	Margin hairs (Fringe on Margin or Base):	1 = Absent (Delta)	2 = Present (Fylking, Merion)	
★ <input type="checkbox"/> 3	Width	1 = Very fine (Mystic)	2 = Fine (Nugget)	3 = Medium (Merion, Fylking)
		4 = Broad (Adelphi, Baron)	5 = Very broad (Monopoly)	

<input type="checkbox"/> 3 ▲ 6 □ 9	mm Width (flag leaf)			
<input type="checkbox"/> 0 ▲ 7 □ 0	mm Narrower than	★ <input type="checkbox"/> 12	1=Nugget	2=Fylking
	Width same as	★ <input type="checkbox"/> 13	4=Merion	3=Delta
<input type="checkbox"/> 0 ▲ 7	mm Wider than	★ <input type="checkbox"/> 1	7=Mystic	5=Newport
<input type="checkbox"/> 5 □ 6 ▲ 3	mm Length (flag leaf)		8=Sabre	6=Baron
<input type="checkbox"/> 5 □ 6 ▲ 3	mm Shorter than	★ <input type="checkbox"/> 12	1=Nugget	9=Reubens
	Length same as	★ <input type="checkbox"/> 13	4=Merion	10=Quantum Leap
<input type="checkbox"/> 1 □ 0 ▲ 0	mm Longer than	★ <input type="checkbox"/> 6	7=Mystic	11=Midnight
	Position of flag leaf (angle to stem):		1 = Appressed	12=Absolute
			2 = Open angle, yet stiff	13=Liberator
			3 = Nodding	

## 7. LEAF SHEATH:

1	2	0	mm sheath length	
★			Seedling Color (base of sheath):	1 = Green (Nugget, Merion)      2 = Red (Delta)
★	1		Hairs on Margin:	1 = Absent (Fylking)      2 = Present (Nugget)
★	1		Margin Roughness (to touch):	1 = Smooth (Delta)      2 = Rough (Sabre)
1			Hairs on Surface	1 = Absent      2 = Present (Nugget)
1			Surface Roughness (to touch):	1 = Smooth (Fylking)      2 = Rough (Ram I)
1			Hairs on both sides just beneath leaf blade (Under collar):	1 = Absent (Merion)      2 = Present (Nugget)
★	1		Hairs on Ligule:	1 = Absent (Fylking)      2 = Short (Baron)
1			Glaucosity:	1 = Absent (Mystic, Enmundi)      2 = Present (Birka)
2			Keel:	1 = Absent (Ram I)      2 = Present (Adelphi)

10 = Quantum Leap      11 = Midnight      12 = Absolute

Colts  
[unclear]

## 8 PANICLE (Mature plant):

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9	6	7
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mm Length (Lowest whorl to top, for 10 plants) Test area:

2	5	6
---	---	---

mm Shorter than

★ 14 1=Nugget 2=Fylking

Rathdrum, Idaho.

3=Delta

14=Touchdown

Panicle length same as

★ 6 4=Merion 5=Newport

6=Baron

2	7	4
---	---	---

mm Longer than

★ 1 7=Mystic 8=Sabre

9=Reubens

★ 2  
1  
1  
2

Color (at 50% flowering):

1 = Not red (Fylking) 2 = Red (Nugget)

Shape of Rachis (Opposite lower side of branches):

1 No bend (Nugget) 2 = Bend (Merion)

★ 1  
1

Collar:

1 = Opened (Nugget) 2 = Closed ( Merion)

★ 2

Branches Attitude (Lowest whorl):

1 = Dropping (America, Prato) 2 = Horizontal (Merion) 3 = Ascending (Tundra)

4	2	7
★ 1		
★ 1		
1		

Number of main branches in lowest whorl

Panicle Habit:

1 = Nodding (Newport) 2= Upright (Nugget)

Panicle Type:

1 = Open 2 = Intermediate 3= Compact

Anther color (anthesis)

1 = Purple 2 = Yellow 3 = Brown

## 9 Lemma:

★ 1  
1  
1  
1

Keel

1 = Galbrous

2 = Slightly pubescent

3 = pubescent

Marginal Nerves

1 = Distinct

2 = Obscure

Intermediate Nerves

1 = Absent

2 = Scant (Baron)

3 = Copious (Merion)

Basal Webbing

## 10. SEED (Floret-not hulled):

★ 2 Apomixis Percentage

1 = more than 95

2 = 85 to 95

3 = less than 85

Phenol Reaction

1 = none-lemma removed (Merion)

2 = Beige (Cougar)

3 = Brown (Windsor)

4 = Black (Mystic 2 hours)

5 = Black ( 24 hours)

0	7	0
---	---	---

mm. Width (average of 10)

3	9	0	0
---	---	---	---

Milligrams per 10,000 seed

11	0	0
----	---	---

Milligrams less than

★ 1 1=Nugget

2=Fylking

3=Delta

10= Quantum leap

Weight same as

★ 11 4=Merion

5=Newport

6=Baron

11=Midnight

3	0	0
---	---	---

Milligrams more than

★ 13 7=Reubens

8=Sabre

9=Reubens

12= Absolute

★ 2 Weight Class (g per 10,000 seed):

1 = Light (&lt; 3g Sydsport, Merion)

13=Liberator

2 = Medium (3g - 4 g Adelphi, Parade)

3 = Heavy (&gt; 4g Fylking, Nugget)

## 11. ENVIRONMENTAL RESISTANCE: (0=Not Tested; 1 = Very Susceptible; 2= Moderately susceptible; 3= Moderately resistant; 4 = Highly resistant):

2	Cool Temperature (Winter color)
2	Shade
0	Salinity

3	Cold (injury)
3	Low Fertility
0	Soil Compaction

3	Heat
0	Acid Soil (<pH. 5.5)
0	Poor Drainage

3	Drought
0	Alkalinity (pH > 7.5)
0	Air Pollution
	Other (specify) _____

## 12. DISEASE RESISTANCE: (0=Not Tested; 1 = Very Susceptible; 2= Moderately susceptible; 3= Moderately resistant; 4 = Highly resistant):

4
4
3

Melting-out *Drechslera poa* (*Helminthosporium vagans*)

0
2
0

Sclerotina Patch *S. borealis*Helminthosporium Leaf spot *Bipolaris sorokiniana*Stem rust *Puccinia graminis*Brown patch *Rhizoctonia solani*Stripe Rust *P. stiformis*

2	Powdery mildew <i>Erysiphe graminis</i>
4	Stripe smut <i>Ustilago striiformis</i>
0	Flag Smut <i>Urocystis agropyri</i>
2	Pink Snow Mold <i>Fusarium nivale</i>
3	Ergot <i>Claviceps purpurea</i>
4	Fusarium blight <i>F. tricinctum</i> , <i>F. roseum</i>
3	Typhula Blight <i>Typhula</i> spp.
3	Dollar spot <i>Sclerotinia homoeocarpa</i>

2	Leaf Rust <i>P. poa-nemoralis</i>
0	Orange Stripe Rust <i>P. poarum</i>
0	Pythium Blight <i>Pythium</i> spp..
0	Red thread <i>Corticium fusciforme</i>
	Other: _____
	Other: _____

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13. INSECTS, NEMATODES, RESISTANCE: (0=Not Tested; 1 = Very Susceptible; 2= Moderately susceptible; 3= Moderately resistant; 4 = Highly resistant):

0	Chinch Bug <i>Blissus</i> spp. (give species: _____)
0	Sod Webworm <i>Crambus</i> spp. (give species: _____)
0	Bluegrass Billbug <i>Sphenophorus parvulus</i> (give species: _____ Manhattan, Kansas site.)
0	White Grub (Japanese Beetle, Chafers. (give species: _____))
0	Greenbug Aphid <i>Schizaphis graminum</i>
	Other: _____
	Other: _____

14. GIVE VARIETY OR VARIETIES THAT MOST CLOSELY RESEMBLE THE APPLICATION VARIETY, For the following characteristics indicate Degree of Resemblance by placing the column marked, D.R., one of the following numbers:

1 = Application variety is less than comparison variety.    2 = Same As    3 = More than, better, greater, darker, more disease resistant, etc.

CHARACTER	VARIETY	D.R.	CHARACTER	VARIETY	D.R.
Maturity-heading	Absolute	1	Leaf width	Quantum Leap	2
Height	Absolute	2	Leaf color spring	Quantum Leap	2
Seed size	Quantum Leap	2	Leaf color summer	Quantum Leap	2
Seed weight	Quantum Leap	2	Leaf color winter	Quantum Leap	2
Cold injury	Quantum Leap	2	Drought	Quantum Leap	2
Heat	Quantum Leap	3	Disease	Quantum Leap	2
Shade	Quantum Leap	2	(Leaf spot)		

☆☆Specify each disease evaluated.

15. ADDITIONAL DESCRIPTION:

Describe all character

AN 100-100-100

RD 17  
100-100-100

200300008

### Exhibit 16D

#### Additional Description of the Variety Perfection Kentucky Bluegrass

'Perfection' is a late maturing cultivar, similar to 'Award,' with a high degree of apomixis. Culm length in Post Falls, ID, at anthesis averages 43 cm and at maturity averages 67 cm. Panicle length averages 9.7 cm. Culms are smooth to the touch and the flag leaf is only slightly rough when felt against the grain. Shape of the spaced plants are fairly rectangular or blocky, meaning that there is less tapering in culm length towards the perimeter of the plant than in other varieties.

Panicle color at anthesis is only slightly purple with a predominate light green cast. Leaf color is a bluish green with an only slightly yellow culm. Leaf texture is medium. Lateral extension from rhizome growth in one year averages 24-cm in diameter.

Most of the variants in this cultivar are similar in appearance to the cultivar itself, making them virtually indistinguishable, except by the breeder. The primary variants in this cultivar show up initially during the heading phase. Very few variants appear in the pre-heading phase of maturation. The heading maturity variants appear to have slightly less purple seedheads than the majority plant form, however their other plant characteristics are indistinguishable. About 1% of the plants are a taller-growing, "common-type" variant with broader, lighter green leaves, and a culm length that exceeds the majority plant form by approximately 12 cm. Similar purpling can be seen in the panicles of these particular variants, indicating their relationship to the cultivar.

Apomixis averages 94%, but varies from 90% to 99% and above, depending on growing conditions. Aberrant progeny are rogued from breeders, foundation, and registered fields to insure continued uniformity and stability, but they will continue to occur in every generation.

Perfection is a versatile Kentucky bluegrass cultivar, with applications on golf courses, sod farms, sports fields, home lawns, roadsides, cemeteries, and other turf areas, where bluegrass is well adapted. Perfection is tolerant of close mowing, down to  $\frac{1}{2}$  inch with good management. Perfection performs well in full sun or partial shade.

IN 1991 100%

R215

R215

Table 1. Morphological characteristics of Kentucky bluegrass (*Poa pratensis* L.) cultivars at reproductive maturity, near Rathdrum, ID, in 1999 and 2000. Missing values indicate varieties not tested in a given year.

Variety	Culm length (cm)		Sheath length (cm)		Panicle length (cm)	
	1999 prob.	2000 prob.	1999 prob.	2000 prob.	1999 prob.	2000 prob.
<b>Perfection</b>	<b>66.7</b>	<b>53.9</b>	<b>12.0</b>	<b>8.9</b>	<b>9.67</b>	<b>8.86</b>
Awesome	51.3	0.000	57.2	0.000	8.9	0.825
Barrister	49.6	0.000	52.9	0.119	10.3	0.000
Tsunami	50.9	0.000	55.3	0.030	10.9	0.000
Nu Destiny	56.7	0.000	56.1	0.001	13.0	0.000
Beyond	48.6	0.000	56.3	0.000	10.2	0.000
Absolute	61.9	0.000	58.6	0.000	11.6	0.060
Arcadia	48.6	0.000	51.9	0.003	10.7	0.000
Award	58.3	0.000	55.8	0.004	10.8	0.000
Baron	40.0	0.000	43.6	0.000	11.8	0.279
Blacksburg	53.6	0.000	50.9	0.000	10.5	0.000
Bluemoon	46.4	0.000	52.7	0.060	11.0	0.000
Chicago 2			46.4	0.000		
Freedom 2	53.2	0.000	46.8	0.000	9.3	0.000
Glade	43.9	0.000	53.9	0.986	11.3	0.001
Impact	45.9	0.000	51.0	0.000	10.2	0.000
Liberator	46.0	0.000	52.6	0.043	10.9	0.000
Limousine	47.2	0.000	45.7	0.000	9.8	0.000
Midnight	54.3	0.000	60.8	0.000	10.4	0.000
Nugget	40.5	0.000	44.8	0.000	8.9	0.000
NuGlade	53.9	0.000	52.8	0.099	11.2	0.000
Odyssey	44.6	0.000	56.7	0.000	10.9	0.000
Quantum Leap	60.0	0.000	51.2	0.000	10.8	0.000
Rambo	46.8	0.000	52.9	0.118	10.0	0.000
Rugby II	45.8	0.000	54.8	0.159	9.8	0.000
Total Eclipse	48.0	0.000	53.9	0.941	9.5	0.000
Touchdown	60.8	0.000	66.1	0.000	16.5	0.000

\*Prob. = Probability that the variety mean is not significantly different from the variety listed at the top of the table. For example, a value of 0.050 or less would indicate significance at the 5% level of probability. Data were analyzed with ANOVA and means were separated with LSD using pair-wise comparisons, based on individual degrees of freedom.

Table 2. Morphological characteristics of Kentucky bluegrass (*Poa pratensis* L.) cultivars at reproductive maturity, near Rathdrum, ID, in 1999 and 2000. Missing values indicate varieties not tested in a given year.

Variety	Flagleaf length (cm)				Flagleaf width (mm)				Flagleaf length-to-width ratio (cm cm <sup>-1</sup> )			
	1999		prob.		1999		prob.		1999		prob.	
	1999	prob.	2000	prob.	1999	prob.	2000	prob.	1999	prob.	2000	prob.
<b>Perfection</b>	<b>5.63</b>		<b>4.83</b>		<b>3.69</b>		<b>1.91</b>		<b>15.4</b>		<b>28.7</b>	
Awesome	5.22	0.137	3.60	0.000	3.18	0.001	1.87	0.557	16.8	0.146	21.2	0.000
Barrister	4.33	0.000	3.81	0.000	3.48	0.190	2.45	0.000	13.1	0.016	16.0	0.000
Tsunami	5.18	0.098	4.04	0.000	4.47	0.000	2.61	0.000	12.5	0.003	16.2	0.000
Nu Destiny	5.90	0.337	4.04	0.000	3.71	0.871	2.58	0.000	16.2	0.364	16.2	0.000
Beyond	4.76	0.001	4.25	0.001	3.09	0.000	2.14	0.002	15.6	0.795	22.4	0.000
Absolute	5.27	0.189	3.88	0.000	4.39	0.000	3.00	0.000	12.3	0.002	13.1	0.000
Arcadia	5.59	0.889	3.81	0.000	3.56	0.404	2.51	0.000	18.3	0.003	16.9	0.000
Award	5.38	0.356	4.05	0.000	3.43	0.091	2.15	0.001	16.2	0.396	20.3	0.000
Baron	4.63	0.000	3.28	0.000	3.71	0.879	3.38	0.000	14.2	0.239	14.3	0.000
Blacksburg	5.18	0.096	3.45	0.000	4.20	0.001	2.97	0.000	12.5	0.003	12.0	0.000
Bluemoon	5.32	0.248	3.95	0.000	3.39	0.058	1.58	0.000	16.1	0.458	27.6	0.310
Chicago 2			3.24	0.000			1.76	0.052			19.1	0.000
Freedom 2	4.28	0.000	3.05	0.000	3.19	0.001	2.58	0.000	14.4	0.313	12.0	0.000
Glade	4.56	0.000	4.08	0.001	3.38	0.050	2.42	0.000	13.8	0.112	18.3	0.000
Impact	4.93	0.010	4.18	0.000	3.37	0.038	1.54	0.000	14.8	0.522	29.5	0.446
Liberator	6.06	0.116	4.33	0.006	3.47	0.159	1.98	0.304	18.1	0.005	23.7	0.000
Limousine	4.36	0.000	3.42	0.000	3.33	0.019	2.56	0.000	14.4	0.322	13.8	0.000
Midnight	5.39	0.385	4.09	0.000	3.18	0.001	2.44	0.000	17.3	0.050	17.1	0.000
Nugget	3.49	0.000	3.46	0.000	3.03	0.000	2.70	0.000	12.2	0.001	12.8	0.000
NuGrade	5.14	0.074	4.01	0.000	3.84	0.329	2.46	0.000	13.7	0.086	16.4	0.000
Odyssey	5.09	0.048	4.49	0.056	4.07	0.012	2.54	0.000	12.7	0.006	17.7	0.000
Quantum Leap	5.11	0.059	4.18	0.000	3.50	0.217	2.30	0.000	14.9	0.645	18.9	0.000
Rambo	4.75	0.001	4.18	0.000	3.35	0.027	2.44	0.000	14.3	0.251	18.0	0.000
Rugby II	4.77	0.002	4.45	0.037	3.16	0.001	1.39	0.000	15.6	0.776	33.4	0.000
Total Eclipse	4.29	0.000	3.75	0.000	2.75	0.000	2.25	0.000	15.9	0.560	18.1	0.000
Touchdown	5.31	0.234	3.65	0.000	3.85	0.283	4.80	0.000	14.8	0.534	8.6	0.000

\*Prob. = Probability that the variety mean is not significantly different from the variety listed at the top of the table. For example, a value of 0.050 or less would indicate significance at the 5% level of probability. Data were analyzed with ANOVA and means were separated with LSD using pair-wise comparisons, based on individual degrees of freedom.

**Table 3.** Morphological characteristics of Kentucky bluegrass (*Poa pratensis* L.) cultivars at reproductive maturity, near Rathdrum, ID, in 1999 and 2000. Missing values indicate varieties not tested in a given year.

Variety	Second leaf length (cm)				Second leaf width (mm)				Length-to-width ratio of second subtending leaf (cm cm <sup>-1</sup> )			
	1999		prob.		1999		prob.		1999		prob.	
	9.98	8.02	4.01	1.78	25.6	52.8						
Perfection	9.03	0.005	7.48	0.038	3.57	0.005	1.88	0.663	26.9	0.335	44.4	0.000
Awesome	6.77	0.000	7.87	0.580	3.77	0.123	2.67	0.000	18.7	0.000	31.8	0.000
Barrister	7.31	0.000	8.00	0.941	4.50	0.002	2.69	0.000	17.1	0.000	31.8	0.000
Tsunami	7.71	0.000	7.17	0.001	4.14	0.400	2.76	0.000	19.4	0.000	28.6	0.000
Nu Destiny	8.37	0.000	7.72	0.255	3.51	0.001	2.13	0.132	24.9	0.535	41.1	0.000
Beyond	8.57	0.000	7.57	0.086	5.08	0.000	2.70	0.000	17.1	0.000	31.3	0.000
Absolute	8.35	0.000	7.53	0.062	4.90	0.000	2.69	0.000	17.4	0.000	32.2	0.000
Arcadia	8.82	0.001	7.89	0.627	3.83	0.245	2.45	0.004	23.9	0.154	35.1	0.000
Award	6.70	0.000	5.87	0.000	5.31	0.000	3.08	0.000	13.4	0.000	24.4	0.000
Baron	7.29	0.000	6.49	0.000	4.17	0.316	3.20	0.000	18.0	0.000	21.5	0.000
Blacksburg	8.70	0.000	6.90	0.000	3.70	0.044	1.76	0.945	24.7	0.448	45.0	0.000
Bluemoon												
Chicago 2												
Freedom 2	7.26	0.000	5.81	0.000	3.88	0.400	2.45	0.004	19.5	0.000	25.2	0.000
Glade	6.84	0.000	6.81	0.000	3.74	0.079	2.65	0.002	19.2	0.000	28.8	0.000
Impact	8.68	0.000	7.79	0.387	3.67	0.031	1.72	0.802	24.6	0.392	51.6	0.541
Liberator	8.49	0.000	7.98	0.896	3.75	0.099	1.97	0.421	23.5	0.082	44.2	0.000
Limousine	6.05	0.000	5.84	0.000	3.15	0.000	2.71	0.001	20.7	0.000	22.4	0.000
Midnight	7.42	0.000	7.74	0.238	3.74	0.081	2.65	0.000	20.3	0.000	30.8	0.000
Nugget	5.51	0.000	5.85	0.000	3.28	0.000	2.64	0.002	18.1	0.000	22.7	0.000
NuGrade	8.17	0.000	8.46	0.087	3.82	0.228	2.80	0.000	22.0	0.004	31.3	0.000
Odyssey	8.30	0.000	9.12	0.000	4.48	0.003	2.70	0.000	19.3	0.000	34.2	0.000
QuantumLeap	7.91	0.000	7.93	0.740	3.80	0.169	2.30	0.024	21.5	0.001	37.4	0.000
Rambo	7.88	0.000	7.78	0.375	3.76	0.103	3.44	0.000	21.8	0.002	32.2	0.000
Rugby II	8.03	0.000	8.45	0.098	3.29	0.000	1.51	0.231	25.6	0.991	59.3	0.002
Total Eclipse	7.10	0.000	7.49	0.045	2.78	0.000	2.33	0.017	27.2	0.219	36.8	0.000
Touchdown	7.38	0.000	7.53	0.124	4.54	0.001	5.80	0.000	17.9	0.000	14.7	0.000

\*Prob. = Probability that the variety mean is not significantly different from the variety listed at the top of the table. For example, a value of 0.050 or less would indicate significance at the 5% level of probability. Data were analyzed with ANOVA and means were separated with LSD using pairwise comparisons, based on individual degrees of freedom.

Table 4. Morphological characteristics of Kentucky bluegrass (*Poa pratensis* L.) cultivars at reproductive maturity, near Rathdrum, ID, in 1999 and 2000.

Missing values indicate varieties not tested in a given year.

Variety	Panicle length of lowest internode (cm)			Panicle length minus the lowest internode (cm)			Internode length below the panicle node (cm)		
	1999 prob.	2000 prob.	1999 prob.	2000 prob.	1999 prob.	2000 prob.	1999 prob.	2000 prob.	
<b>Perfection</b>	<b>2.21</b>	<b>1.66</b>	<b>7.46</b>	<b>5.95</b>	<b>30.3</b>	<b>22.7</b>			
Awesome	1.96	0.000	1.54	0.002	6.56	0.000	5.77	0.110	24.5
Barrister	1.90	0.000	1.58	0.035	6.16	0.000	6.13	0.089	25.0
Tsunami	2.04	0.000	1.51	0.000	6.86	0.000	5.93	0.844	29.0
Nu Destiny	2.34	0.009	1.87	0.000	7.81	0.037	7.12	0.000	38.1
Beyond	1.91	0.000	1.57	0.016	6.40	0.000	5.66	0.010	27.3
Absolute	2.00	0.000	1.32	0.000	6.30	0.000	5.37	0.000	28.8
Arcadia	2.17	0.456	1.51	0.000	6.94	0.002	5.62	0.003	31.2
Award	2.12	0.073	1.53	0.001	6.90	0.001	5.80	0.170	30.3
Baron	2.07	0.003	1.56	0.034	7.14	0.059	5.83	0.393	26.5
Blacksburg	1.97	0.000	1.33	0.000	6.46	0.000	5.34	0.000	34.8
Bluemoon	2.07	0.004	1.53	0.001	6.96	0.003	5.75	0.080	28.1
Chicago 2			1.29	0.000			4.60	0.000	23.4
Freedom 2	1.88	0.000	1.28	0.000	6.13	0.000	5.11	0.000	29.7
Glade	1.98	0.000	1.94	0.000	7.14	0.059	6.96	0.000	30.5
Impact	1.84	0.000	1.59	0.076	6.47	0.000	5.81	0.219	28.1
Liberator	1.94	0.000	1.51	0.000	6.88	0.001	5.61	0.003	28.6
Limousine	1.81	0.000	1.42	0.000	5.74	0.000	4.62	0.000	30.8
Midnight	1.95	0.000	1.55	0.003	6.22	0.000	5.18	0.000	28.9
Nugget	1.66	0.000	1.54	0.013	5.27	0.000	5.43	0.000	27.9
NuGrade	2.11	0.036	1.46	0.000	7.19	0.108	6.11	0.145	30.7
Odyssey	2.08	0.008	1.68	0.676	7.15	0.067	6.65	0.000	28.1
Quantum Leap	2.05	0.001	1.44	0.000	6.88	0.001	5.75	0.075	30.6
Rambo	1.82	0.000	1.43	0.000	6.39	0.000	5.51	0.000	27.7
Rugby II	1.87	0.000	1.60	0.147	6.35	0.000	5.91	0.767	27.1
Total Eclipse	1.77	0.000	1.52	0.001	5.82	0.000	5.59	0.001	26.7
Touchdown	3.26	0.000	2.36	0.000	8.98	0.000	8.19	0.000	37.3

2 0 0 3 0 0 0 3

\*Prob. = Probability that the variety mean is not significantly different from the variety listed at the top of the table. For example, a value of 0.050 or less would indicate significance at the 5% level of probability. Data were analyzed with ANOVA and means were separated with LSD using pair-wise comparisons, based on individual degrees of freedom.

Table 5. Morphological characteristics of Kentucky bluegrass (*Poa pratensis* L.) cultivars at reproductive maturity, near Rathdrum, ID, in 1999 and 2000. Missing values indicate varieties not tested in a given year.

Variety	Branches at lowest panicle whorl			Culm length from panicle node to flagleaf collar (cm)			Culm length from crown to flagleaf node (cm)		
	1999	prob.	2000	1999	prob.	2000	1999	prob.	2000
<b>Perfection</b>	<b>4.27</b>		<b>3.56</b>	<b>18.2</b>		<b>13.9</b>	<b>26.8</b>		<b>31.2</b>
Awesome	4.02	0.078	3.07	0.000	19.4	0.063	15.5	0.000	12.8
Barrister	4.30	0.814	3.46	0.346	18.8	0.416	15.3	0.004	12.5
Tsunami	4.22	0.724	3.50	0.565	18.2	0.894	14.8	0.057	13.2
Nu Destiny	4.56	0.040	3.19	0.000	25.1	0.000	15.2	0.006	9.0
Beyond	3.78	0.001	3.18	0.000	17.2	0.091	14.6	0.135	13.1
Absolute	3.90	0.010	3.01	0.000	17.2	0.106	10.7	0.000	24.8
Arcadia	4.35	0.556	3.28	0.009	20.5	0.000	14.2	0.537	9.6
Award	4.25	0.906	3.43	0.228	19.5	0.045	16.5	0.000	19.1
Baron	4.68	0.003	3.70	0.283	14.8	0.000	9.1	0.000	6.4
Blacksburg	4.17	0.480	3.48	0.550	24.2	0.000	16.8	0.000	10.5
Bluemoon	4.03	0.100	3.27	0.005	17.1	0.071	14.8	0.056	9.7
Chicago 2			3.78	0.036			17.6	0.000	
Freedom 2	4.90	0.000	4.13	0.000	20.4	0.001	14.3	0.332	15.5
Glade	4.08	0.196	3.03	0.000	19.2	0.117	15.3	0.013	5.9
Impact	4.00	0.060	3.30	0.014	17.9	0.605	15.0	0.023	10.1
Liberator	3.97	0.034	3.23	0.002	17.7	0.368	13.6	0.513	9.5
Limousine	4.97	0.000	3.93	0.004	21.0	0.000	14.8	0.105	9.4
Midnight	3.98	0.046	2.97	0.000	18.5	0.672	17.1	0.000	17.2
Nugget	3.85	0.003	2.87	0.000	19.0	0.247	13.2	0.230	7.9
NuGlade	4.23	0.814	3.48	0.464	19.5	0.043	12.5	0.006	13.9
Odyssey	4.47	0.158	3.83	0.013	17.3	0.135	11.6	0.000	8.7
QuantumLeap	4.43	0.239	3.38	0.094	19.7	0.019	13.4	0.344	20.5
Rambo	4.13	0.347	3.39	0.116	17.7	0.371	13.5	0.487	11.2
Rugby II	4.02	0.078	3.47	0.417	17.4	0.169	13.2	0.190	10.8
Total Eclipse	3.73	0.000	3.33	0.026	17.2	0.111	14.4	0.233	13.8
Touchdown	3.55	0.000	3.30	0.044	20.8	0.000	14.9	0.076	11.6

\*Prob. = Probability that the variety mean is not significantly different from the variety listed at the top of the table. For example, a value of 0.050 or less would indicate significance at the 5% level of probability. Data were analyzed with ANOVA and means were separated with LSD using pair-wise comparisons, based on individual degrees of freedom.

Table 6. Morphological characteristics of Kentucky bluegrass (*Poa pratensis* L.) cultivars at reproductive maturity, near Rathdrum, ID, in 1999 and 2000. Missing values indicate varieties not tested in a given year.

Variety	Panicle fresh weight (g/10 panicles)			Seed length (mm)			Seed width (mm)		
	1999 prob.	2000 prob.	1999 prob.	2000 prob.	1999 prob.	2000 prob.	1999 prob.	2000 prob.	1999 prob.
<b>Perfection</b>	<b>2.19</b>	<b>1.76</b>	<b>3.04</b>	<b>2.87</b>	<b>0.70</b>	<b>0.64</b>			
Awesome	1.57	0.000	1.45	0.069	3.10	0.072	2.80	0.046	0.73
Barrister	1.91	0.080	1.98	0.193	2.95	0.016	2.84	0.415	0.70
Tsunami	2.03	0.326	1.80	0.804	3.09	0.166	2.78	0.004	0.71
Nu Destiny	1.65	0.001	2.11	0.039	3.13	0.010	2.97	0.005	0.72
Beyond	1.87	0.030	1.50	0.123	3.14	0.005	2.83	0.188	0.71
Absolute	1.30	0.000	1.85	0.562			3.02	0.000	
Arcadia	2.23	0.838	2.23	0.005	3.14	0.004	2.86	0.790	0.70
Award	1.86	0.038	1.82	0.714	3.10	0.077	2.90	0.407	0.69
Baron	1.76	0.028	2.27	0.014			2.98	0.011	
Blacksburg	2.04	0.342	1.42	0.103			2.49	0.000	
Bluemoon	0.97	0.000	1.53	0.188	3.12	0.021	2.88	0.882	0.69
Chicago 2			1.98	0.196			3.05	0.000	
Freedom 2	1.80	0.015	1.49	0.114			2.96	0.009	
Glade	1.64	0.001	1.80	0.844	3.16	0.007	3.04	0.000	0.74
Impact	1.45	0.000	1.41	0.038	3.01	0.389	2.79	0.018	0.72
Liberator	1.36	0.000	1.55	0.226	3.06	0.538	2.83	0.208	0.69
Limousine	2.33	0.481	1.01	0.000			2.67	0.000	
Midnight	2.61	0.010	1.59	0.317	3.05	0.787	2.87	0.991	0.70
Nugget	0.99	0.000	1.18	0.005	3.22	0.000	3.29	0.000	0.73
NuGade	1.60	0.000	2.01	0.135	3.16	0.000	2.84	0.300	0.71
Odyssey	1.40	0.000	1.88	0.449	3.15	0.001	2.88	0.711	0.68
QuantumLeap	2.40	0.196	1.99	0.162	3.14	0.007	2.88	0.906	0.69
Rambo	1.11	0.000	1.43	0.051	3.13	0.009	2.81	0.089	0.70
Rugby II	0.92	0.000	1.86	0.533	3.03	0.841	2.94	0.044	0.69
Total Eclipse	2.10	0.571	1.31	0.009	3.09	0.148	2.77	0.002	0.70
Touchdown	1.72	0.018	1.94	0.374			2.92	0.277	0.72

\*Prob. = Probability that the variety mean is not significantly different from the variety listed at the top of the table. For example, a value of 0.050 or less would indicate significance at the 5% level of probability. Data were analyzed with ANOVA and means were separated with LSD using pair-wise comparisons, based on individual degrees of freedom.

Table 7. Morphological characteristics of Kentucky bluegrass (*Poa pratensis* L.) cultivars at reproductive maturity, near Rathdrum, ID, in 1999-2002.

Missing values indicate varieties not tested in a given year.

Variety	Seed length-to-width ratio (cm cm-1)				Seed weight per 100 seeds (g)				Reproductive maturity rating, 7 June (1-9 scale, 9=early)			
	1999 prob.	2000 prob.	1999 prob.	2000 prob.	1999 prob.	2000 prob.	1999 prob.	2000 prob.	2001 prob.	2002 prob.	2001 prob.	2002 prob.
<b>Perfection</b>	<b>4.39</b>	<b>4.53</b>	<b>0.039</b>	<b>0.035</b>	<b>6.6</b>	<b>6.7</b>	<b>6.9</b>	<b>6.4</b>				
Awesome	4.31	0.163	4.40	0.050	0.042	0.026	0.035	0.726	5.8	0.128	6.3	0.414
Barrister	4.25	0.020	4.51	0.736	0.041	0.061	0.033	0.010	6.1	0.384	6.8	0.786
Tsunami	4.40	0.872	4.49	0.509	0.045	0.000	0.032	0.000	6.6	1.000	6.6	0.586
Nu Destiny	4.37	0.779	4.33	0.005	0.046	0.000	0.042	0.000	7.3	0.128	7.7	0.001
Beyond	4.46	0.263	4.52	0.795	0.043	0.004	0.033	0.024	5.8	0.128	6.4	0.406
Absolute			4.50	0.635			0.040	0.000	7.9	0.009	8.4	0.000
Arcadia	4.49	0.093	4.42	0.094	0.045	0.000	0.035	0.865	6.4	0.828	5.7	0.001
Award	4.53	0.018	4.50	0.638	0.038	0.515	0.034	0.045	4.8	0.001	4.8	0.000
Baron			3.99	0.000			0.047	0.000	8.4	0.000	8.3	0.000
Blacksburg			3.83	0.000			0.034	0.179	7.7	0.030	6.9	0.406
Bluemoon	4.53	0.025	4.59	0.423	0.039	0.846	0.033	0.002	5.7	0.082	5.6	0.000
Chicago 2			4.47	0.350			0.046	0.000			7.3	0.033
Freedom 2			4.55	0.819			0.031	0.000	7.6	0.051	8.0	0.000
Glade	4.31	0.284	4.47	0.450	0.042	0.100	0.037	0.189	7.1	0.276	7.8	0.000
Impact	4.23	0.008	4.40	0.051	0.036	0.127	0.032	0.001	5.4	0.030	6.4	0.406
Liberator	4.46	0.279	4.39	0.036	0.036	0.084	0.032	0.000	5.8	0.128	4.8	0.000
Limousine			4.60	0.472			0.028	0.000			6.3	0.174
Midnight	4.39	0.927	4.43	0.122	0.040	0.209	0.036	0.464	5.0	0.002	5.8	0.006
Nugget	4.45	0.431	4.67	0.127	0.050	0.000	0.048	0.000	8.4	0.000	7.5	0.006
NuGlade	4.50	0.060	4.49	0.549	0.038	0.851	0.036	0.410	5.6	0.051	5.6	0.000
Odyssey	4.67	0.000	4.57	0.639	0.035	0.015	0.032	0.001	4.8	0.001	5.5	0.000
QuantumLeap	4.58	0.002	4.37	0.017	0.036	0.098	0.038	0.005	5.4	0.030	6.0	0.027
Rambo	4.49	0.110	4.53	0.943	0.040	0.481	0.032	0.001	6.0	0.276	4.6	0.000
Rugby II	4.38	0.811	4.39	0.039	0.040	0.414	0.034	0.159	5.0	0.002	5.8	0.003
Total Eclipse	4.45	0.348	4.45	0.243	0.042	0.050	0.030	0.000	5.4	0.030	5.8	0.006
Touchdown			4.07	0.000			0.046	0.000	9.0	0.000	9.0	0.000

\**Prob.* = Probability that the variety mean is not significantly different from the variety listed at the top of the table. For example, a value of 0.050 or less would indicate significance at the 5% level of probability. Data were analyzed with ANOVA and means were separated with LSD using pair-wise comparisons, based on individual degrees of freedom.

Table 8.

MEAN TURFGRASS QUALITY RATINGS OF KENTUCKY BLUEGRASS CULTIVARS  
GROWN AT FOURTEEN LOCATIONS IN THE U.S. 1/  
MAINTAINED USING "SCHEDULE B" \*  
2001 DATA

NAME	TURFGRASS QUALITY RATINGS 1-9; 9=IDEAL TURF 2/														MEAN
	KY1	MN1	MOL	NCL	NE2	NJ2	OK1	PAL	RIL	VA1	WA1	WA3	VA1	WA1	
MIDNIGHT II (A98-739)	8.4	7.5	6.3	4.8	5.8	6.6	6.3	6.8	8.3	6.7	4.0	7.3	4.0	6.4	6.4
J-1513	7.9	6.2	6.7	4.4	6.4	6.5	6.4	5.8	6.9	8.1	7.1	4.2	7.1	4.7	6.3
AWARD	7.8	6.9	6.2	4.2	6.1	6.8	6.0	6.6	7.9	7.6	4.0	7.1	4.0	4.5	6.3
J-1420	7.8	7.1	5.9	4.4	6.3	6.1	6.6	5.8	6.7	8.1	6.9	4.3	6.6	4.8	6.2
UNKNOWN	8.2	6.9	5.7	4.6	6.4	6.0	6.2	6.8	6.7	6.8	4.1	6.9	4.4	6.2	6.2
J-1515	7.7	6.8	6.1	4.3	6.4	6.4	6.4	5.8	6.8	7.6	7.3	4.2	6.8	4.5	6.2
MOON SHADOW (PICK 113-3)	7.9	6.6	7.2	4.6	6.2	6.4	6.2	6.0	6.3	7.4	6.4	4.4	7.0	4.3	6.2
ARCADIA	8.1	7.5	6.9	4.1	6.5	6.2	6.6	6.2	6.3	8.0	5.9	3.6	7.2	3.9	6.2
BARRISTER (J-1655)	7.9	7.1	5.7	4.1	6.8	5.4	5.4	6.3	6.9	7.9	6.6	4.5	7.2	3.9	6.2
J-2695	8.1	7.6	6.2	4.2	6.2	5.8	6.4	6.1	7.0	7.5	6.2	3.8	7.1	4.4	6.2
IMPACT	8.0	5.8	6.2	4.3	6.1	6.5	6.9	6.3	6.7	8.0	6.2	3.8	7.3	4.4	6.2
ODYSSEY	7.8	7.5	5.8	4.4	6.0	6.0	6.5	6.0	6.6	7.7	7.0	3.8	6.7	4.4	6.2
MIDNIGHT	8.5	6.5	6.4	4.2	5.8	6.8	6.3	6.3	7.3	6.1	4.1	7.2	4.4	6.2	6.2
LANGARA	8.1	7.2	6.6	4.6	5.2	5.3	6.1	6.4	6.8	7.6	6.7	4.0	6.8	4.9	6.2
TSUNAMI (J-2487)	8.4	6.5	6.6	4.4	6.5	5.5	6.6	6.1	6.7	7.3	6.1	4.1	6.4	4.9	6.2
J-2890	8.2	6.5	4.8	4.3	6.5	6.2	6.1	6.1	7.1	7.5	6.1	4.4	7.0	4.8	6.1
J-1715	7.8	6.7	6.4	4.0	6.0	6.2	6.7	5.6	6.8	7.0	6.2	4.8	6.9	4.2	6.1
BLUESTONE (PST-731)	8.1	6.6	5.9	4.2	6.4	5.9	6.0	6.9	7.0	7.7	5.8	4.1	6.9	4.1	6.1
MOONLIGHT	7.6	5.4	7.0	4.2	6.8	5.9	5.8	6.0	6.4	7.6	6.3	4.6	7.7	4.2	6.1
TOTAL ECLIPSE	7.9	6.8	5.9	4.2	5.8	5.7	5.9	6.0	6.6	7.1	6.6	4.1	7.2	4.6	6.1
J-1368	8.3	7.0	5.3	4.3	6.2	5.9	6.2	6.1	6.7	8.2	6.3	3.7	6.7	4.3	6.1
A97-1432	8.3	6.9	6.5	4.2	5.8	6.2	6.3	6.0	6.5	7.0	5.2	4.0	6.9	5.2	6.1
PST-1701	7.7	7.3	6.3	4.9	5.5	4.9	5.7	6.6	6.1	6.2	7.0	5.0	6.8	4.7	6.0
BLACKSTONE	8.1	5.9	6.6	4.1	5.9	6.4	5.7	6.4	6.5	6.7	6.4	4.7	6.7	4.6	6.0
BEYOND (J-1880)	7.8	7.0	5.4	4.5	6.5	5.8	6.6	6.1	6.8	7.5	5.9	4.1	6.2	4.3	6.0
EVERGLADE	7.6	6.5	4.5	4.0	6.4	6.2	5.8	5.7	6.6	7.7	6.8	4.6	7.0	4.8	6.0
BEDAZZLED	7.9	6.0	5.6	4.1	6.4	6.7	6.3	6.1	5.9	7.1	6.7	4.6	6.7	4.2	6.0
MALLARD (A97-1439)	7.9	7.3	6.1	4.1	6.0	6.0	5.5	5.6	6.1	7.1	6.6	4.1	6.9	4.8	6.0
J-1838	8.1	5.5	4.9	4.4	6.7	5.9	6.4	6.3	6.9	7.3	6.0	3.8	7.0	4.9	6.0
ARROW (A97-1567)	7.9	7.3	6.1	4.3	6.3	5.9	5.7	5.3	6.4	7.1	5.8	4.2	6.9	4.8	6.0
BA 83-113	8.1	7.3	6.8	4.4	5.6	6.1	6.2	5.1	6.7	6.7	5.9	4.1	6.4	4.5	6.0
FREEDOM II	7.8	5.9	6.1	3.6	5.9	7.3	6.1	6.5	7.6	6.0	3.4	6.9	4.4	4.4	6.0
PICK-232	7.7	7.1	7.0	4.5	6.1	5.8	5.9	5.2	6.3	6.9	6.5	4.3	6.4	4.1	6.0
PRINCETON 105	7.6	6.3	5.9	4.4	5.3	5.6	6.1	6.0	6.9	7.5	7.1	4.5	6.9	4.5	6.0
BRILLIANT	7.4	6.8	6.8	4.0	6.4	5.3	6.1	5.5	6.3	7.1	6.5	4.7	7.1	4.6	6.0
DLF 76-9037	7.2	6.9	7.0	4.2	6.2	5.7	6.2	5.3	6.2	7.2	7.0	3.9	6.1	4.2	6.0
QUANTUM LEAP	8.1	6.7	5.7	3.9	6.1	5.8	5.9	5.6	7.4	5.6	4.5	6.9	4.4	5.9	5.9
LIBERATOR	8.1	6.3	6.2	3.9	6.2	5.5	6.3	6.0	6.7	7.1	5.7	4.1	6.7	3.7	5.9
APOLLO	7.2	6.6	7.3	4.3	5.9	5.2	5.7	5.2	6.6	7.3	7.0	3.9	6.2	4.8	5.9
NUGLADE	8.0	6.0	5.7	4.2	6.2	5.7	6.2	5.8	6.7	6.9	5.5	4.4	7.0	4.9	5.9
UNIQUE	7.3	6.8	6.3	3.6	6.2	5.8	6.2	5.1	6.2	7.3	7.2	4.1	6.4	4.7	5.9
J-2561	8.4	6.0	4.6	3.7	6.3	6.1	5.3	5.2	6.7	7.5	6.0	4.3	7.0	4.7	5.9
BARONNETTE (BA 81-058)	8.1	7.0	6.8	4.3	5.9	5.5	6.2	5.3	6.1	6.9	5.3	4.5	6.4	4.3	5.9
A97-1330	7.5	6.3	6.1	4.3	6.1	5.5	6.0	5.6	6.4	7.3	6.6	4.2	6.3	4.5	5.9
RITA	8.1	5.7	6.4	4.9	5.4	5.8	5.6	5.5	6.4	6.2	6.6	4.6	6.9	4.4	5.9
ROYCE (A98-304)	7.3	6.9	6.1	3.9	6.2	5.0	5.5	5.4	5.8	6.9	4.4	5.8	4.8	5.9	5.9
B3-171	7.8	7.1	6.3	3.4	3.6	3.7	3.7	3.7	3.7	3.7	5.8	5.4	4.2	5.7	5.9

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EXCURSION (J-1648)	7.7	4.9	4.1	6.2	5.7	5.5	5.5	5.5	5.6	5.3	6.0	4.0	4.4	4.4
RUGBY II	8.2	5.7	4.1	6.1	5.7	4.1	4.3	5.1	5.8	5.1	5.8	4.2	3.6	5.9
SR 2284 (SRX 2284)	8.2	7.1	4.0	6.0	5.7	4.3	5.1	5.9	5.4	5.7	5.4	4.7	4.7	5.9
BAR PP 0471	7.3	7.0	4.0	6.0	5.7	4.1	4.4	6.4	5.3	5.1	5.4	4.0	4.0	5.8
BA 82-288	8.1	6.6	5.7	5.7	6.1	4.1	4.3	5.4	5.7	5.1	5.4	4.1	4.1	5.3
CHAMPLAIN (A98-1275)	7.2	6.8	5.5	4.1	5.4	4.1	4.1	5.9	5.5	6.1	5.4	6.3	6.3	4.5
PST-10G-27	7.5	6.0	5.8	3.6	6.3	4.3	4.3	5.6	5.6	5.4	5.4	6.4	6.4	5.8
PRO SEEDS - 453	7.6	6.0	6.1	4.1	5.2	5.2	5.2	5.8	6.3	5.9	5.9	6.4	6.4	5.8
PST-161	8.0	6.8	5.4	4.3	4.9	4.3	4.3	5.7	5.8	5.7	5.7	6.2	6.2	4.6
BLACKSBURG II (PST-1BMY)	8.1	7.5	6.0	4.1	5.7	5.7	5.7	5.1	5.1	5.1	5.1	6.1	6.1	5.8
HV 238	7.6	7.2	5.4	4.3	5.9	5.9	5.9	5.4	5.4	5.4	5.4	6.4	6.4	5.8
PST-B5-89	7.7	5.6	6.4	3.6	5.1	5.1	5.1	5.4	5.4	5.4	5.4	7.1	7.1	4.3
H92-203	7.2	6.6	5.9	4.4	5.6	4.4	4.4	5.6	5.6	5.6	5.6	6.7	6.7	5.8
EVEREST	7.8	5.1	4.5	3.9	6.4	4.0	4.0	5.7	5.7	5.5	5.5	6.2	6.2	4.3
H94-293	7.8	5.5	5.7	4.0	5.9	5.9	5.9	5.1	5.1	5.1	5.1	6.4	6.4	5.8
BAR PP 0566	8.3	6.3	5.4	4.4	5.9	6.1	6.1	5.4	5.4	5.4	5.4	6.2	6.2	4.9
PICK 417	7.7	6.0	6.2	4.4	5.3	5.3	5.3	5.8	5.8	5.7	5.7	6.2	6.2	4.1
A98-365	7.8	6.6	5.9	4.0	5.3	5.3	5.3	6.3	6.3	5.0	5.0	6.5	6.5	4.4
CHICAGO II	7.4	6.8	5.2	3.9	5.9	5.9	5.9	6.0	6.0	4.9	4.9	5.4	5.4	3.7
BAR PP 0468	7.5	5.6	3.8	5.6	5.6	5.6	5.6	6.1	6.1	5.0	5.0	6.8	6.8	3.7
ALPINE	7.4	5.1	5.9	4.7	4.9	4.9	4.9	5.6	5.6	5.8	5.8	6.1	6.1	4.5
CABERNET	7.9	6.5	5.9	4.5	4.8	4.8	4.8	5.9	5.9	6.1	6.1	6.6	6.6	4.2
J-2885	7.9	6.4	5.0	4.0	5.7	5.7	5.7	5.6	5.6	5.4	5.4	6.2	6.2	4.5
SRX 26351	7.6	5.5	5.3	4.5	4.8	4.8	4.8	5.4	5.4	6.0	6.0	6.2	6.2	4.5
SHOWCASE	8.2	5.9	5.6	3.7	5.7	5.7	5.7	5.1	5.1	5.1	5.1	6.1	6.1	4.5
WILDWOOD	7.7	6.4	5.7	4.5	5.2	5.2	5.2	5.8	5.8	5.7	5.7	6.0	6.0	4.6
B3-185	7.7	6.8	5.8	3.7	5.6	5.6	5.6	6.2	6.1	5.2	5.2	6.2	6.2	4.2
SERENE	7.8	6.0	5.9	4.5	4.8	4.8	4.8	5.9	5.9	5.6	5.6	6.5	6.5	4.5
PST-H6-150	7.5	5.8	5.5	3.7	5.9	5.9	5.9	5.8	5.8	5.7	5.7	6.6	6.6	4.1
GOLDSTAR (A98-296)	7.7	6.4	5.7	4.5	5.2	5.2	5.2	5.8	5.8	5.7	5.7	7.5	7.5	3.9
PST-B5-125	7.8	6.5	6.4	4.2	5.1	5.1	5.1	5.6	5.6	5.7	5.7	6.7	6.7	3.8
A97-1409	8.1	5.6	5.3	4.3	5.2	5.2	5.2	5.7	5.7	5.5	5.5	6.6	6.6	4.1
COVENTRY	7.6	5.3	5.9	4.3	5.7	5.7	5.7	4.9	4.9	5.7	5.7	6.7	6.7	4.0
SRX 2394	7.5	5.5	5.8	4.4	4.7	4.7	4.7	6.0	6.0	5.3	5.3	6.2	6.2	4.8
A96-427	8.0	4.8	4.8	4.1	5.5	5.5	5.5	5.9	5.9	5.7	5.7	6.0	6.0	3.9
BLUE RIDGE (A97-1449)	7.9	5.7	5.1	4.0	6.1	6.1	6.1	6.2	6.2	5.0	5.0	7.1	7.1	4.9
BARIRIS	7.5	6.7	5.6	4.1	5.3	5.2	5.2	5.6	5.6	5.2	5.2	6.4	6.4	5.7
SRX 2114	7.4	6.4	5.6	5.0	4.9	5.1	5.1	5.3	5.3	5.9	5.9	6.5	6.5	5.7
JEFFERSON	7.4	6.4	5.9	3.9	5.6	5.2	5.2	5.8	5.8	6.1	6.1	6.2	6.2	4.4
ROYALE (A97-1336)	7.4	5.0	5.0	3.4	5.0	5.0	5.0	5.7	5.7	6.2	6.2	7.7	7.7	5.6
H92-558	8.2	6.5	6.0	4.3	5.3	5.3	5.3	5.1	5.1	5.2	5.2	6.6	6.6	4.5
PICK 453	7.8	6.1	6.3	4.3	5.4	5.4	5.4	4.8	4.8	5.1	5.1	6.7	6.7	4.5
HALLMARK	7.8	5.6	5.3	4.5	5.2	5.2	5.2	5.5	5.5	5.8	5.8	6.3	6.3	4.5
EAGLETON	7.4	6.8	6.1	4.7	5.6	5.6	5.6	5.8	5.8	5.7	5.7	6.8	6.8	4.5
IB7-308	7.3	6.4	5.1	4.0	5.2	5.2	5.2	6.2	6.2	5.4	5.4	6.1	6.1	4.3
FAIRFAX	7.6	6.4	6.5	4.5	5.3	5.3	5.3	4.0	4.0	5.6	5.6	6.1	6.1	4.4
GOLDRUSH	7.4	5.3	6.3	4.4	5.5	5.5	5.5	4.4	4.4	5.6	5.6	6.0	6.0	4.3
SI A96-386	8.0	5.9	4.8	4.0	4.5	4.5	4.5	6.3	6.3	5.7	5.7	6.1	6.1	4.5
RAMBO	7.7	5.4	6.0	4.2	5.3	5.3	5.3	6.0	6.0	5.8	5.8	6.4	6.4	5.6
BOUTIQUE	7.8	6.0	4.5	4.8	5.6	5.6	5.6	4.0	4.0	5.4	5.4	6.0	6.0	4.5
PST-YORK HARBOR 4	7.5	6.1	4.3	4.3	4.9	4.9	4.9	5.5	5.5	5.6	5.6	6.7	6.7	4.3
BA 00-6001	7.8	6.7	5.0	3.5	5.6	5.6	5.6	5.1	5.1	5.3	5.3	6.4	6.4	3.8
PP H 6370	7.4	5.9	4.3	4.9	5.3	5.3	5.3	4.9	4.9	5.4	5.4	6.6	6.6	4.6
PST-222	7.4	5.3	5.5	3.9	5.5	5.5	5.5	5.6	5.6	5.5	5.5	5.7	5.7	4.3
A96-451	7.1	6.7	5.1	4.2	5.4	5.4	5.4	5.8	5.8	5.5	5.5	6.1	6.1	5.6

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DLF 76-9036	5.6	4.2
PST-1804	5.5	4.0
SONOMA	5.5	4.5
MISTY	5.5	4.5
LAKESHORE (A93-200)	6.1	6.1
ALLURE	6.1	6.1
ASCOT	5.0	5.0
MONTE CARLO (A96-402)	5.0	5.0
PST-B3-170	5.5	4.7
A98-183	5.8	4.4
SHAMROCK	7.8	3.4
B4-128A	7.7	5.1
CHATEAU	6.9	5.0
CHAMPAGNE	7.4	5.3
BARONIE	7.8	5.6
LIMERICK	7.3	5.1
HV 140	7.9	4.6
B5-144	7.4	5.6
BORDEAUX	7.5	5.0
ABBEY	7.7	6.3
RAVEN	7.4	6.2
LIMOUSINE	7.4	5.0
A98-1028	7.4	6.5
BARON	7.5	4.6
B5-45	7.3	5.5
CHELSEA	7.4	4.6
LILY	7.3	6.0
BROOKLAWN	7.8	5.9
A98-881	7.9	5.0
PST-B4-246	7.4	6.3
MARQUIS	7.6	5.3
NORTH STAR	7.2	4.4
PST-604	7.6	5.7
PST-108-79	7.7	5.2
BARTITIA	7.5	5.5
ENVICIA	7.5	5.7
BARITONE	7.2	5.6
JULIA	7.3	5.8
PP H 6366	6.8	4.4
A98-139	7.8	6.1
BH 00-6002	7.0	5.7
SFX 27921	7.1	3.9
DLF 76-9032	7.1	5.7
PP H 7832	7.6	4.0
A97-857	7.5	4.8
NA-K991	7.2	4.6
JULIUS	6.6	5.3
BOOMERANG	8.1	4.3
WASHINGTON	7.1	5.5
A98-407	7.5	3.9
BH 00-6003	7.8	6.2
PP H 7907	4.0	4.6

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WELLINGTON	7.6	5.4	5.7	4.0	4.3	4.3	5.1	4.2	5.8	5.3	5.8	3.9	5.6
BLUE KNIGHT	6.8	3.5	4.0	4.2	5.1	4.7	5.5	5.2	4.9	6.3	6.4	3.1	6.3
A96-742	6.8	5.3	5.6	3.8	4.6	4.0	5.5	4.3	5.9	5.1	5.7	3.8	5.6
BARZAN	7.6	4.5	3.7	3.4	4.7	4.7	4.2	5.4	6.5	5.9	6.0	3.3	5.7
DLF 76-9034	6.7	5.8	4.2	4.7	4.6	4.3	4.3	3.9	6.0	5.4	5.6	4.0	5.1
JEWEL	7.5	5.5	5.0	4.4	4.9	4.5	5.6	4.0	6.0	4.1	4.6	3.6	5.6
99AN-53	7.9	5.0	4.7	3.1	4.7	4.7	4.8	4.7	4.8	6.3	4.9	3.0	5.8
PP H 79229	7.2	3.4	3.5	3.6	4.3	5.0	4.4	4.9	5.6	6.5	5.2	3.6	5.8
KENBLUE	7.3	4.4	5.3	4.4	4.4	3.2	5.3	3.9	5.5	4.5	6.2	3.7	5.1
NA-K992	6.7	5.1	4.5	3.8	4.3	4.7	3.8	3.7	5.9	5.5	5.3	3.7	6.4
CVB-20631	6.4	3.5	3.8	3.0	4.2	4.6	3.8	5.3	5.9	7.0	5.1	3.3	3.7
BODACIOUS	7.8	3.8	4.1	3.3	4.6	5.4	4.4	3.6	5.7	5.8	4.0	3.2	5.8
SRX QG245	7.3	3.8	4.5	4.4	4.8	3.9	4.6	4.7	4.0	5.3	5.0	3.1	6.1
GO-9LM9	6.8	3.6	5.2	3.6	4.6	4.1	4.9	3.7	4.2	4.0	4.9	3.3	5.7
LSD VALUE	0.9	1.2	1.1	1.1	1.1	0.8	0.8	0.7	0.6	0.9	0.9	0.7	1.0
C.V. (%)	7.1	12.8	12.5	16.9	13.0	9.4	8.9	8.4	6.1	8.0	9.5	11.4	10.0

1/ TO DETERMINE STATISTICAL DIFFERENCES AMONG ENTRIES, SUBTRACT ONE ENTRY'S MEAN FROM ANOTHER ENTRY'S MEAN.  
STATISTICAL DIFFERENCES OCCUR WHEN THIS VALUE IS LARGER THAN THE CORRESPONDING LSD VALUE (LSD 0.05).

2/ C.V. (COEFFICIENT OF VARIATION) INDICATES THE PERCENT VARIATION OF THE MEAN IN EACH COLUMN.

\* SCHEDULE B - 1 - 2 INCH MOWING HEIGHT 3 - 4 lbs. N/1000 FT2/YEAR IRRIGATION TO PREVENT DORMANCY

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Table 9.

MEAN TURFGRASS QUALITY RATINGS OF KENTUCKY BLUEGRASS CULTIVARS  
 GROWN AT SEVEN LOCATIONS 1/  
 IN THE NORTHEAST REGION  
 2001 DATA

## TURFGRASS QUALITY RATINGS 1-9; 9=IDEAL TURF 2/

NAME	MA1	ME1	NJ1	NJ2	NY1	PA1	RI1	MEAN
AWARD	7.1	7.2	6.8	6.0	5.7	7.9	7.6	6.9
MIDNIGHT II (A98-739)	7.3	7.3	6.5	6.3	5.8	8.3	6.7	6.9
J-1515	7.2	7.5	6.4	5.8	5.6	7.6	7.3	6.8
J-1513	7.2	7.3	6.3	5.8	5.5	8.1	7.1	6.8
UNKNOWN	7.1	6.9	6.5	6.8	5.4	7.7	6.8	6.7
IMPACT	7.2	6.8	7.0	6.3	5.7	8.0	6.2	6.7
J-1420	7.3	6.7	6.4	5.8	5.7	8.1	6.9	6.7
BEDAZZLED	7.4	7.1	6.5	6.1	6.0	7.1	6.7	6.7
BARRISTER (J-1655)	7.3	6.8	6.5	6.3	5.5	7.9	6.6	6.7
LANGARA	7.4	7.0	6.3	6.4	5.5	7.6	6.7	6.7
J-1368	7.0	7.2	6.4	6.1	5.4	8.2	6.3	6.7
J-2695	7.0	7.2	7.0	6.1	5.5	7.5	6.2	6.7
MOONLIGHT	7.0	7.2	7.1	6.0	5.5	7.6	6.3	6.7
ROYALE (A97-1336)	6.8	6.9	6.6	6.2	5.9	7.7	6.3	6.6
ARCADIA	7.0	7.1	6.6	6.2	5.6	8.0	5.9	6.6
ODYSSEY	7.2	6.2	6.5	6.0	5.5	7.7	7.0	6.6
TSUNAMI (J-2487)	7.2	6.8	6.9	6.1	5.6	7.3	6.1	6.6
J-1838	7.3	6.9	6.9	6.3	5.5	7.3	6.0	6.6
MIDNIGHT	7.3	6.9	6.6	6.3	5.4	7.3	6.1	6.6
SRX 26351	6.8	7.1	5.8	6.8	5.3	7.5	6.6	6.5
TOTAL ECLIPSE	7.3	6.7	6.6	6.0	5.5	7.1	6.6	6.5
ROYCE (A98-304)	7.2	6.9	6.1	5.5	5.3	7.7	6.9	6.5
BEYOND (J-1880)	7.3	7.4	6.6	6.1	5.0	7.5	5.9	6.5
EVERGLADE	7.3	6.7	6.0	5.7	5.4	7.7	6.8	6.5
RUGBY II	7.5	6.8	6.3	5.9	5.6	7.1	6.2	6.5
MOON SHADOW (PICK 113-3)	6.9	7.3	5.8	6.0	5.5	7.4	6.4	6.5
J-2890	7.2	6.1	6.6	6.1	5.7	7.5	6.1	6.5
BLACKSTONE	7.0	7.0	6.2	6.4	5.5	6.7	6.4	6.5
FREEDOM II	7.1	7.4	5.4	6.1	5.6	7.6	6.0	6.5
PST-1701	7.0	7.1	5.8	6.6	5.4	6.2	7.0	6.4
BLUESTONE (PST-731)	7.3	6.2	6.8	6.0	5.4	7.7	5.8	6.4
UNIQUE	7.4	7.2	5.5	5.1	5.3	7.3	7.2	6.4
B3-171	7.2	7.2	5.8	5.4	5.2	7.5	6.5	6.4
APOLLO	7.3	7.3	5.5	5.2	5.2	7.3	7.0	6.4
EVEREST	7.0	6.8	5.7	5.5	5.5	8.0	6.2	6.4
QUANTUM LEAP	7.0	6.8	6.5	5.9	5.5	7.4	5.6	6.4
BRILLIANT	7.4	6.9	5.6	5.5	5.8	7.1	6.5	6.4
PST-B5-89	6.9	6.9	6.0	4.8	5.4	7.9	6.8	6.4
ALPINE	6.9	6.8	6.0	5.8	5.3	7.3	6.6	6.4
IB7-308	7.0	7.3	6.3	5.4	5.8	7.5	5.2	6.4
HALLMARK	6.9	6.8	6.2	5.8	5.5	6.8	6.3	6.3
PRINCETON 105	7.2	6.5	5.5	6.0	5.5	6.5	7.1	6.3
J-2561	6.9	6.7	6.3	5.3	5.5	7.5	6.0	6.3
SR 2284 (SRX 2284)	7.0	7.1	5.5	5.8	5.4	7.2	6.2	6.3
A97-1330	7.0	6.9	5.3	5.6	5.5	7.3	6.6	6.3
A97-1432	7.2	7.5	5.9	6.0	5.5	7.0	5.2	6.3
B4-128A	7.2	7.3	5.2	5.5	5.5	6.9	6.5	6.3
MONTE CARLO (A96-402)	6.7	7.0	6.1	5.3	5.8	6.6	6.5	6.3
MALLARD (A97-1439)	7.1	6.9	5.8	5.6	5.0	7.1	6.6	6.3
LIBERATOR	7.0	6.4	6.6	6.0	5.4	7.1	5.7	6.3
A97-1715	6.9	6.6	5.9	5.6	5.9	7.0	6.2	6.3
SERENE	7.0	6.9	5.8	5.5	5.4	6.6	6.7	6.3
BAR PP 0468	7.5	7.1	5.7	5.0	5.1	7.6	6.0	6.3
PST-161	6.9	6.8	6.0	5.8	5.8	6.2	6.4	6.3
H94-293	7.1	6.7	5.9	5.2	5.4	7.4	6.2	6.3
BAR PP 0471	7.0	6.9	5.4	5.4	5.8	6.9	6.3	6.3
SHOWCASE	7.2	6.6	5.2	5.2	5.5	7.3	6.7	6.3
PST-108-79	6.8	6.9	4.9	6.3	5.4	7.2	6.2	6.2
HV 238	6.9	6.6	5.8	5.3	5.7	7.0	6.4	6.2
DLF 76-9037	7.0	6.4	5.3	5.3	5.4	7.2	7.0	6.2
B3-185	7.1	6.6	5.5	5.2	5.7	7.2	6.2	6.2
PST-1QG-27	7.0	6.6	5.5	5.4	5.3	7.1	6.6	6.2
PRO SEEDS - 453	7.0	6.3	5.6	5.9	5.7	7.3	5.8	6.2
ABBEY	7.1	7.1	5.5	5.9	5.9	5.8	6.3	6.2

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NUGLADE	7.1	6.6	6.2	5.8	5.4	6.9	5.5	6.2
COVENTRY	6.9	6.7	5.4	5.6	5.5	6.5	6.9	6.2
A96-427	6.9	6.6	5.6	5.7	5.4	7.0	6.2	6.2
J-2885	7.1	6.7	5.6	5.4	5.3	7.3	6.0	6.2
PICK-232	6.9	7.1	5.5	5.2	5.4	6.9	6.5	6.2
PST-B5-125	6.9	6.9	5.5	5.8	5.3	7.1	6.0	6.2
SRX 2394	7.0	7.1	5.8	5.4	5.7	7.4	5.1	6.2
CHELSEA	6.9	6.9	4.3	5.3	5.2	7.5	7.2	6.2
H92-203	7.2	6.6	5.3	5.4	5.4	6.7	6.7	6.2
RITA	6.7	6.9	5.8	5.5	5.5	6.2	6.6	6.2
GOLDSTAR (A98-296)	6.8	6.7	5.8	5.7	5.1	6.8	6.2	6.2
HV 140	6.5	6.6	6.0	6.0	5.9	6.3	6.0	6.2
ARROW (A97-1567)	7.0	6.8	5.4	5.3	5.7	7.1	5.8	6.2
GOLDRUSH	7.1	6.8	5.5	5.8	5.3	6.0	6.7	6.2
PP H 6366	7.3	5.9	5.0	5.2	5.7	7.4	6.5	6.2
SRX 2114	7.1	6.5	5.7	5.9	5.3	6.8	5.9	6.2
BLUE RIDGE (A97-1449)	6.9	7.2	5.4	5.0	5.3	7.1	6.1	6.2
CHAMPLAIN (A98-1275)	7.0	6.8	5.4	5.5	4.9	6.7	6.8	6.2
EXCURSION (J-1648)	7.1	6.1	6.0	5.6	5.6	6.8	6.0	6.2
ALLURE	6.8	6.7	5.3	5.2	5.6	6.3	7.1	6.1
BAR PP 0573	6.9	6.7	5.0	5.5	5.8	6.6	6.5	6.1
SONOMA	7.1	7.1	5.1	5.7	5.4	6.7	5.8	6.1
BORDEAUX	7.1	7.2	6.0	5.3	5.5	6.8	4.9	6.1
DLF 76-9036	6.8	6.4	5.6	6.0	5.3	6.3	6.5	6.1
MISTY	7.0	6.8	5.2	5.7	5.4	6.2	6.5	6.1
ASCOT	6.8	6.9	5.0	5.8	5.3	7.5	5.5	6.1
A98-365	6.9	6.9	5.2	5.0	5.5	6.5	6.9	6.1
LIMERICK	6.7	6.3	5.2	5.6	6.1	6.5	6.5	6.1
EAGLETON	7.3	6.2	6.0	5.7	5.4	5.7	6.5	6.1
PST-H6-150	7.0	6.3	5.0	5.6	5.2	7.2	6.5	6.1
PICK 453	7.0	6.8	5.5	5.1	5.7	6.7	6.0	6.1
PST-222	7.1	6.9	5.1	5.5	5.5	6.6	5.8	6.1
WILDWOOD	7.0	6.8	5.4	6.0	5.1	6.2	6.1	6.1
BA 82-288	6.7	6.9	5.6	5.8	5.5	6.2	5.8	6.1
BA 00-6001	6.8	6.6	5.6	5.3	5.3	6.9	6.0	6.1
CABERNET	6.6	6.1	6.3	5.9	5.3	6.5	5.8	6.1
A97-1409	6.9	6.9	5.6	6.0	4.8	6.4	5.9	6.1
A98-1028	6.9	7.0	5.6	5.1	5.3	6.5	6.0	6.0
BOUTIQUE	7.1	6.4	6.4	5.4	5.5	7.0	4.5	6.0
BARTITIA	7.0	6.1	5.3	5.3	5.4	6.5	6.7	6.0
B5-45	6.5	7.4	5.3	5.3	5.2	6.3	6.3	6.0
PST-YORK HARBOR 4	6.8	6.9	5.4	5.6	5.0	6.7	5.8	6.0
SI A96-386	7.0	6.1	5.6	5.2	5.3	7.6	5.4	6.0
JULIUS	7.3	6.9	4.7	4.5	5.8	7.2	5.8	6.0
PST-1804	6.7	6.6	5.4	5.0	5.8	6.6	6.0	6.0
BROOKLAWN	6.8	6.7	5.8	4.7	5.4	6.7	6.1	6.0
BLUE KNIGHT	7.0	6.2	5.7	5.2	5.4	6.3	6.4	6.0
PST-B3-170	7.1	7.4	5.4	5.5	5.3	5.7	5.7	6.0
LILY	6.5	6.5	5.6	4.9	5.8	5.7	7.0	6.0
CHICAGO II	6.9	6.8	5.6	4.9	5.5	7.1	5.4	6.0
PICK 417	6.9	6.9	5.0	5.7	5.1	6.5	5.9	6.0
FAIRFAX	6.6	6.6	5.2	5.0	5.6	6.3	6.6	6.0
A98-881	6.5	6.4	5.8	5.3	5.5	6.2	6.3	6.0
BAR PP 0566	6.9	6.9	5.0	4.7	5.6	6.8	6.1	6.0
H92-558	6.9	7.2	5.6	4.8	5.5	6.7	5.3	6.0
SHAMROCK	6.6	6.6	5.9	4.8	5.6	6.3	6.2	6.0
A96-739	7.0	7.4	5.9	5.0	5.2	5.9	5.6	6.0
A96-451	7.0	7.0	5.0	5.1	5.6	6.5	5.5	6.0
RAMBO	7.2	5.9	5.7	5.3	5.6	6.4	5.8	6.0
A98-183	6.9	7.0	5.4	5.3	5.1	6.8	5.4	6.0
CHATEAU	6.7	6.4	4.9	5.3	5.4	6.3	6.8	6.0
RAVEN	6.7	6.6	5.5	5.6	5.5	5.8	6.1	6.0
LAKESHORE (A93-200)	6.9	6.0	5.4	5.4	5.2	6.3	6.4	6.0
B5-144	6.5	6.9	4.8	4.9	5.7	6.1	6.7	6.0
BARON	7.0	5.8	5.4	5.5	5.7	6.3	5.9	5.9
BLACKSBURG II (PST-1BMY)	6.8	6.6	5.1	4.9	5.5	6.4	6.1	5.9
B5-43	6.6	6.8	4.7	4.8	5.7	6.4	6.4	5.9
BA 83-113	6.9	6.7	4.7	5.1	5.4	6.7	5.9	5.9
NORTH STAR	6.8	5.9	5.3	5.6	5.5	6.5	5.7	5.9
BA 84-140	6.8	7.5	5.5	4.5	5.5	6.0	5.7	5.9
PP H 6370	6.5	6.4	5.0	4.9	5.4	6.6	6.6	5.9
BARONETTE (BA 81-058)	6.5	6.6	5.1	5.3	5.6	6.9	5.3	5.9
EST-B4-246	7.1	7.1	5.2	5.1	5.5	6.5	4.8	5.9

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JEFFERSON	6.8	5.9	5.0	5.5	5.6	6.1	6.2	5.9
JULIA	7.0	6.9	5.2	5.1	5.5	6.0	5.5	5.9
LIMOUSINE	7.0	6.4	4.7	5.1	5.5	6.5	5.9	5.9
BH 00-6002	6.9	6.7	5.0	4.9	5.5	5.9	6.2	5.9
MARQUIS	6.9	6.4	5.1	5.3	5.7	6.1	5.5	5.9
PST-H5-35	6.6	6.5	5.2	5.0	5.5	7.1	5.0	5.8
SRX 27921	5.4	7.2	5.2	5.0	5.3	6.8	5.9	5.8
PP H 7907	6.7	6.6	4.8	4.7	5.4	6.5	5.9	5.8
CHAMPAGNE	6.7	6.5	4.7	4.8	5.8	6.3	5.9	5.8
PP H 7832	6.9	6.1	5.3	4.8	5.3	6.4	5.6	5.8
BARIRIS	6.8	5.7	5.0	5.2	5.3	6.1	6.3	5.8
ENVICTA	6.9	6.2	5.3	5.3	5.5	5.3	6.0	5.8
PST-604	6.5	6.3	4.7	4.7	5.4	6.3	6.2	5.7
DLF 76-9032	7.1	6.3	4.9	4.6	5.9	6.3	5.0	5.7
BARZAN	6.4	6.1	5.0	5.4	5.3	5.9	6.0	5.7
BOOMERANG	6.4	7.1	4.8	4.3	5.9	6.6	5.1	5.7
BARITONE	6.9	6.6	4.1	5.0	5.2	6.1	6.0	5.7
A98-407	7.0	6.3	4.1	4.4	5.6	6.8	5.4	5.7
BARONIE	7.2	6.3	4.1	4.8	4.9	6.1	5.7	5.6
A97-857	6.1	6.2	5.0	4.2	5.5	6.1	5.7	5.5
CVB-20631	6.7	5.3	3.9	5.3	5.2	7.0	5.1	5.5
NA-K991	6.6	6.2	4.8	4.8	5.5	6.4	4.0	5.5
A98-139	6.5	5.7	4.7	5.1	5.5	5.8	5.0	5.5
99AN-53	6.5	5.9	4.2	4.7	5.6	6.3	4.9	5.4
PP H 7929	6.4	6.1	3.8	4.9	5.0	6.5	5.2	5.4
A96-742	6.6	6.2	4.2	4.3	5.5	5.1	5.7	5.4
SRX QG245	6.4	6.2	4.5	4.7	5.3	5.3	5.0	5.4
WASHINGTON	6.6	5.8	4.0	4.5	5.3	5.1	6.0	5.3
DLF 76-9034	6.6	6.1	3.6	3.9	5.7	5.4	5.6	5.3
KENBLUE	5.9	6.2	4.4	3.9	5.3	4.5	6.2	5.2
WELLINGTON	5.9	5.8	3.9	4.2	5.2	5.3	5.8	5.2
BH 00-6003	5.8	6.4	3.7	4.2	5.3	5.6	4.8	5.1
BODACIOUS	6.1	5.9	4.0	3.6	5.8	5.8	4.0	5.0
NA-K992	5.9	6.1	3.3	3.7	5.5	5.5	5.3	5.0
JEWEL	6.0	5.8	4.2	4.0	5.5	4.1	4.6	4.9
GO-9LM9	5.1	5.1	3.8	3.7	5.4	4.0	4.9	4.6
LSD VALUE		0.4	1.0	0.7	0.7	0.6	0.9	0.9
C.V. (%)		3.4	9.2	8.4	8.4	6.7	8.0	9.5
								0.3
								7.8

1/ TO DETERMINE STATISTICAL DIFFERENCES AMONG ENTRIES, SUBTRACT ONE ENTRY'S MEAN FROM ANOTHER ENTRY'S MEAN.

STATISTICAL DIFFERENCES OCCUR WHEN THIS VALUE IS LARGER THAN THE CORRESPONDING LSD VALUE (LSD 0.05).

2/ C.V. (COEFFICIENT OF VARIATION) INDICATES THE PERCENT VARIATION OF THE MEAN IN EACH COLUMN.

Table 10. SEEDLING VIGOR RATINGS OF KENTUCKY BLUEGRASS CULTIVARS 1/ 2001 DATA

NAME	NAME	SEEDLING VIGOR RATINGS 1-9; 9=MAXIMUM VIGOR 2/										MEAN				
		CO1	IA1	IL3	MA1	MD1	MN1	MO1	NE1	NE2	NJ1	NY1	WA3	SD1	PA1	WY1
WASHINGTON		5.0	8.0	8.7	8.0	6.3	6.7	5.3	7.3	7.7	8.3	7.7	3.3	6.7	8.0	6.8
KENBLUE		6.3	7.0	7.3	8.0	7.3	7.0	6.3	7.7	8.0	7.7	8.0	2.7	7.3	7.0	6.8
GO-9LM9		4.7	6.7	6.3	7.0	6.7	7.7	7.3	7.0	7.0	7.0	8.3	3.0	6.7	5.0	7.7
ABBEY		5.0	6.3	5.0	7.0	6.7	7.7	7.0	6.3	8.3	7.0	7.7	3.7	6.0	5.0	7.7
WELLINGTON		4.7	6.0	7.0	7.0	5.7	5.7	7.0	6.0	7.3	7.3	7.3	3.7	6.3	7.3	6.3
LILY		5.0	6.7	4.7	7.0	6.3	6.3	7.0	3.7	7.0	8.0	6.7	4.0	6.3	7.3	6.2
WILDWOOD		5.0	7.0	4.7	7.0	4.3	6.0	7.3	5.0	7.3	7.7	7.0	3.0	7.3	6.3	7.3
ARROW (A97-1567)		5.0	6.7	5.0	6.3	6.3	6.7	7.3	3.7	7.3	8.3	6.7	3.7	6.7	6.3	6.2
PST-1804		5.3	6.3	5.7	7.0	5.3	6.3	7.0	4.3	8.0	7.0	6.7	4.0	6.3	6.3	6.1
RAVEN		5.0	7.0	4.0	7.3	5.0	7.3	6.7	2.7	7.0	7.0	7.0	3.3	6.3	4.0	6.3
ALPINE		5.0	5.3	6.0	7.0	5.0	5.7	7.3	3.7	6.7	8.3	6.0	3.0	7.3	6.3	6.0
BARONIE		7.0	7.3	5.3	6.0	6.0	6.3	7.0	3.3	6.3	8.3	7.7	6.0	4.3	6.0	6.0
GOLDRUSH		5.0	6.3	3.3	7.3	6.7	5.7	6.3	4.3	6.7	8.3	5.7	3.7	5.7	6.7	6.0
EAGLETON		5.3	6.7	3.7	6.3	5.0	7.0	7.3	3.7	7.7	8.0	7.0	3.3	4.3	4.0	5.9
IMPACT		5.3	6.3	3.3	8.0	5.0	6.0	6.3	3.0	6.7	7.3	7.0	3.3	6.7	4.3	5.9
J-2695		5.7	5.0	5.7	7.0	6.3	6.3	7.0	3.3	6.7	7.0	7.0	3.3	6.7	4.3	6.0
DLF 76-9036		5.3	6.0	5.7	7.0	6.3	6.3	4.7	7.0	7.0	6.3	6.7	4.0	6.0	2.7	6.3
LIBERATOR		5.0	6.3	4.7	6.7	5.3	5.7	6.3	3.0	7.0	7.7	8.0	3.7	5.7	3.0	6.0
PICK-232		5.3	6.0	4.3	5.0	5.3	3.7	7.3	5.0	6.7	9.0	7.7	4.0	6.3	4.0	5.9
SERENE		4.0	7.0	5.3	6.7	5.0	5.7	7.0	4.0	7.0	7.0	7.0	3.7	6.7	6.0	6.3
AWARD		5.3	5.7	4.3	6.7	6.3	4.7	6.3	4.3	7.0	8.7	6.7	3.0	5.7	3.7	5.9
RAMBO		5.0	6.0	2.7	8.0	6.3	6.3	7.0	3.7	6.3	8.0	7.7	3.0	6.0	3.7	5.9
HALLMARK		5.3	7.0	4.0	4.0	5.7	6.0	7.0	4.0	6.7	7.0	7.3	2.7	6.7	4.0	5.8
H94-293		5.3	5.7	4.3	7.7	5.3	5.7	6.7	3.3	7.3	8.0	7.7	3.0	5.7	3.0	6.3
BARTITIA		6.0	6.7	4.3	6.7	6.3	7.0	6.7	3.3	7.0	7.0	7.0	6.7	3.7	5.3	6.3
BH 00-6002		5.0	5.7	5.3	6.7	5.0	6.0	7.0	3.0	7.0	7.0	6.7	3.0	6.0	6.7	5.8
LANGARA		5.3	6.3	4.0	7.7	5.7	6.0	7.0	3.7	6.3	6.7	6.7	3.0	6.0	6.7	5.8
JEFFERSON		6.0	6.3	5.7	5.3	5.0	5.0	7.7	2.7	7.0	7.7	7.3	3.0	5.0	8.0	5.8
ENVICTA		5.0	6.7	4.7	4.3	4.7	6.0	6.0	4.0	6.3	7.3	7.3	3.0	6.0	3.0	6.3
TSUNAMI (J-2487)		5.0	5.7	5.3	7.3	5.0	5.7	6.7	4.0	7.3	6.7	7.0	2.7	5.7	7.7	5.8
A96-742		5.0	4.7	6.0	6.0	6.3	5.7	6.0	6.7	2.7	6.3	8.0	6.3	2.7	6.7	6.0
ROYCE (A98-304)		5.0	6.0	4.3	7.7	5.0	5.7	6.0	3.3	7.3	8.3	6.0	3.0	6.0	3.0	5.7
BARIRIS		5.0	6.0	4.3	7.7	6.0	7.7	7.3	3.0	7.3	7.0	7.3	3.0	6.3	6.0	5.7
LIMOUSINE		5.0	6.3	3.3	6.0	5.3	5.3	6.7	5.3	6.3	7.3	6.0	3.7	6.7	6.0	5.7
NUGLADE		5.0	5.7	4.0	6.0	5.7	6.0	6.7	3.7	7.0	7.0	6.7	3.0	6.0	3.7	5.7
UNKNOWN		5.3	5.7	4.0	6.7	5.0	5.7	7.0	4.3	7.3	7.7	6.7	3.0	5.7	3.0	5.3
APOLLO		6.7	4.0	7.3	4.3	5.3	5.7	6.7	3.7	7.3	7.0	5.7	3.3	6.7	3.3	5.7
ARCADIA		5.7	5.7	3.7	6.7	6.0	5.0	6.7	3.7	7.3	7.7	6.3	3.0	5.7	3.7	5.7
BARRISTER (J-1655)		5.7	5.7	4.3	7.7	5.7	6.0	6.3	4.0	7.3	6.3	5.7	3.0	6.0	3.0	5.7
J-1513		5.7	5.0	3.3	6.3	4.7	6.3	5.7	3.7	6.7	8.0	6.3	6.7	2.3	5.3	5.7
ODYSSEY		5.0	5.7	4.7	6.0	4.3	5.3	6.3	3.7	6.7	8.7	7.3	3.0	5.7	4.0	5.7
COVENTRY		5.0	6.0	4.0	5.3	3.7	5.7	6.7	4.0	7.3	7.3	5.7	3.3	6.7	3.3	5.6
HV 140		5.3	6.3	4.3	7.7	5.3	5.3	6.7	3.7	7.3	7.3	5.3	3.0	4.7	3.0	5.6
BEDAZZLED		5.3	6.0	5.3	7.7	5.7	6.7	6.7	3.3	7.7	8.0	7.3	3.0	4.0	3.7	5.6
BLACKSTONE		5.3	6.3	4.3	4.3	3.7	5.7	6.3	4.3	6.0	7.3	6.7	3.7	4.0	5.7	5.6
SHAMROCK		5.0	5.7	5.0	5.0	5.7	6.0	4.3	6.0	4.0	7.3	6.3	3.7	3.3	5.3	5.6
BORDEAUX		5.3	5.3	4.0	6.0	6.3	6.7	6.7	3.3	7.3	7.3	6.0	2.7	3.0	3.0	5.6
SRX 26351		5.0	5.7	4.0	7.7	5.0	5.7	6.0	4.3	7.0	7.3	6.7	2.7	4.3	4.0	6.0
SRX 2394		5.0	6.0	4.3	6.0	4.0	5.0	6.3	3.3	6.3	8.3	6.7	2.7	4.0	3.7	5.6
BRILLIANT		5.0	6.0	2.7	7.0	5.3	5.7	6.0	2.7	7.3	8.0	7.0	5.0	2.7	5.0	5.6

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B3-185	BROOKLAWN	5.3	4.7	4.3	7.0	7.0	2.7	4.7	3.3	5.0	5.7	7.0	3.0	3.7	5.0	5.1
	PST-222	5.0	3.0	6.0	4.3	5.0	6.7	3.3	7.0	8.3	4.3	6.3	3.3	4.3	6.0	5.1
	A98-365	5.0	4.7	3.7	5.0	5.7	6.0	2.7	6.7	8.0	4.3	5.7	3.0	4.3	6.0	5.1
	B3-171	5.0	5.7	3.7	6.3	4.7	7.3	2.7	6.3	7.0	4.3	5.7	3.0	2.3	5.0	6.7
	A96-127	5.0	6.0	2.3	4.7	5.0	5.3	2.7	5.3	6.7	5.3	6.7	3.0	4.3	5.0	6.7
	BA 83-113	5.7	5.0	3.7	7.0	3.3	5.0	6.7	6.3	7.7	6.7	4.0	5.3	2.7	3.7	4.3
	NA-K992	5.7	5.7	3.3	5.3	4.7	6.0	4.0	6.0	7.0	6.3	5.7	2.7	5.0	6.7	5.1
	ROYALE (A97-1336)	6.0	6.0	3.0	4.0	3.7	5.7	7.0	2.3	6.0	7.7	4.7	2.7	3.3	5.0	7.3
	A97-857	5.0	5.7	3.0	8.0	5.7	6.3	5.7	4.0	8.0	7.7	4.7	5.7	3.7	4.0	5.3
	BOUTIQUE	5.6	6.3	3.0	4.0	4.3	4.7	6.7	4.7	6.3	7.7	6.0	5.0	3.3	2.3	4.7
	PST-YORK HARBOR 4	5.3	6.3	4.3	6.0	5.0	6.7	3.0	6.3	7.3	6.3	4.3	2.7	4.0	3.0	4.7
	MONTE CARLO (A96-402)	5.3	6.0	4.0	5.0	4.3	6.0	6.7	7.3	7.7	6.7	6.0	4.0	3.7	5.0	6.0
	A97-1409	5.0	6.3	4.0	5.0	2.3	5.0	6.7	3.0	6.0	7.3	6.0	4.7	3.7	3.0	5.3
	J-2561	5.0	5.3	4.0	2.3	5.0	5.0	5.7	6.0	3.0	7.0	7.7	6.3	5.0	3.7	5.0
	NA-K991	4.7	3.0	3.3	4.7	5.0	6.0	4.7	6.3	7.3	9.0	6.3	5.3	5.7	3.0	6.3
	A97-1432	5.0	6.0	3.7	4.3	5.7	6.3	3.7	7.3	7.3	6.7	5.0	6.7	3.3	4.7	4.3
	QUANTUM LEAP	5.0	3.0	5.3	5.0	5.7	7.3	3.3	7.0	5.7	5.3	4.7	3.3	2.3	4.7	3.7
	SRX 27921	5.0	5.3	3.0	7.0	5.0	6.0	4.0	6.3	8.7	6.3	5.7	3.0	5.7	6.3	5.1
	EVEREST	5.0	5.3	3.3	4.7	5.0	5.0	6.7	3.7	7.0	7.7	6.3	5.0	3.0	4.0	4.3
	EVERGLADE	5.3	5.7	3.0	4.3	5.3	4.3	5.7	3.3	6.7	6.7	6.7	5.3	3.3	3.0	5.7
	CHELSEA	5.0	5.7	2.0	7.3	4.7	5.7	6.7	3.7	6.3	7.0	4.7	5.0	2.3	6.0	6.3
	A96-739	5.0	6.0	4.0	4.0	2.3	6.0	6.3	3.7	7.0	7.0	6.0	5.7	3.0	5.3	4.7
	B5-45	5.3	4.7	3.3	5.0	5.0	5.7	5.0	6.7	2.7	7.3	7.0	5.7	3.7	5.3	5.0
	ASCOT	5.0	5.3	3.0	6.0	3.0	5.0	6.0	3.3	6.0	8.0	5.0	5.0	3.0	3.7	4.3
	DLF 76-9032	5.3	3.3	4.0	4.7	6.0	6.3	4.0	5.7	7.3	7.3	3.0	4.3	3.3	3.7	5.0
	J-2885	5.0	3.3	4.0	3.7	5.7	6.3	3.3	7.0	7.0	7.3	4.7	5.7	3.0	3.7	7.3
	PST-B3-170	5.0	5.7	3.3	4.7	3.7	4.7	6.7	2.7	7.0	7.0	6.7	5.7	3.0	3.7	5.3
	BAR PP 0468	5.3	5.3	3.0	7.0	4.3	4.3	6.0	2.3	6.7	8.3	7.7	4.3	3.0	5.0	4.7
	DLF 76-9034	5.3	5.0	3.7	4.0	4.3	5.7	6.0	4.3	6.7	8.3	6.7	5.3	3.0	3.7	5.3
	CABERNET	5.3	6.0	3.0	5.7	3.0	4.3	6.3	3.7	5.3	7.7	6.7	4.7	3.0	5.3	6.0
	PP H 7832	5.0	5.0	3.3	2.7	4.7	5.7	6.0	3.3	6.7	7.3	6.0	4.7	3.0	4.0	7.3
	PST-604	5.0	6.0	3.3	5.3	3.7	4.7	5.7	3.0	6.3	8.0	6.7	4.0	3.0	4.0	4.8
	PST-B5-89	5.0	5.3	2.7	6.7	3.0	5.7	6.3	2.3	6.0	7.3	6.0	4.0	3.0	4.3	4.7
	BLUE RIDGE (A97-1449)	5.0	3.7	5.0	4.3	6.0	6.0	6.3	3.3	7.3	5.7	3.0	4.7	3.0	4.3	4.8
	PP H 7907	5.0	5.3	3.0	5.7	3.7	5.0	6.0	3.7	7.0	7.0	4.3	4.7	3.0	4.3	5.3
	PST-B5-125	5.3	6.3	4.7	2.3	3.0	4.7	6.3	3.0	6.7	7.3	6.7	4.3	3.0	3.7	4.8
	BLACKSBURG II (PST-1BWT5.3	6.7	3.3	4.3	4.3	4.3	6.7	3.0	6.3	7.0	6.3	6.7	4.3	3.0	3.7	4.8
	PST-H6-150	5.0	5.3	3.7	5.7	2.3	3.7	7.0	2.3	7.0	8.0	7.3	3.7	4.0	4.0	4.8
	H92-558	5.0	6.7	3.0	2.0	3.7	5.0	6.3	3.7	7.0	7.0	4.3	4.7	2.3	2.7	4.7
	B5-144	5.0	5.0	3.3	6.7	3.7	4.3	6.3	2.3	6.7	7.7	6.7	3.0	2.3	2.7	4.0
	A97-1715	5.7	6.3	2.7	2.3	3.0	4.3	6.3	3.7	6.7	9.0	7.0	5.3	3.0	3.7	4.7
	BOOMERANG	5.0	5.7	3.0	5.7	3.7	4.3	6.3	1.7	5.7	8.0	7.0	4.3	2.7	3.7	4.6
	SHOWCASE	5.0	5.7	2.0	4.3	3.0	4.7	6.7	2.7	7.0	7.7	7.0	4.0	2.7	3.7	4.7
	PRO SEEDS - 453	5.3	3.7	4.0	4.7	6.7	6.7	6.7	2.7	6.3	7.7	7.0	5.3	3.0	3.7	4.6
	A96-451	5.0	5.7	3.0	3.7	4.3	3.3	6.7	3.0	6.0	7.7	7.0	5.3	3.0	3.7	4.6
	99AN-53	5.0	6.7	3.3	4.3	5.0	4.7	6.3	1.7	5.7	8.0	6.0	3.0	2.0	3.0	4.6
	CHAMPLAIN (A98-1275)	5.0	4.7	4.0	3.0	4.3	4.3	6.3	3.0	6.7	6.7	6.0	4.3	3.0	3.7	4.5
	PST-B4-246	5.3	5.3	2.7	3.0	2.3	4.0	7.0	3.7	6.0	7.0	6.7	4.0	2.7	3.7	4.6
	B5-43	5.3	5.7	2.7	2.3	3.0	5.3	5.3	2.3	7.0	7.3	7.0	4.7	3.0	3.7	4.6
	PST-H5-35	5.3	6.0	3.0	2.3	3.7	4.3	6.7	2.3	6.7	7.0	6.7	5.0	3.7	3.0	4.6
	ALLURE	5.0	5.0	2.7	3.0	3.7	5.0	6.3	3.7	6.7	8.0	7.3	4.3	3.0	3.7	4.5
	BAR PP 0573	5.3	6.3	3.0	1.7	4.0	4.0	6.3	3.7	6.0	7.0	6.0	4.0	2.7	3.0	4.5
	BODACIOUS	5.0	5.0	2.3	6.7	5.0	4.0	6.0	3.0	6.3	8.3	6.3	3.0	2.7	3.0	4.5
	SI A96-386	5.0	5.3	2.3	3.0	4.0	4.3	6.3	2.3	6.3	7.7	6.7	5.0	2.7	3.0	4.4
	BA 00-6001	5.3	4.7	2.7	2.3	3.7	6.7	6.7	3.0	6.3	8.3	7.3	4.7	3.0	3.7	4.4
	BH 00-6003	5.7	4.7	2.7	2.3	3.7	6.7	6.7	2.0	6.7	8.0	7.3	4.3	2.3	3.0	4.4

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PST-108-79	5.0	5.3	2.0	3.0	2.3	4.0	6.7	2.3	7.7	7.7	6.7	2.0	4.7	3.7	3.0	4.3
BARZAN	6.0	4.3	3.7	3.7	2.3	4.3	6.3	1.7	6.0	8.0	7.3	2.3	2.3	3.7	3.0	4.3
CHATTAU	5.0	4.7	2.0	2.3	2.3	5.0	6.3	3.0	7.3	7.7	7.0	2.3	3.3	2.7	2.3	4.3
PP H 7929	5.0	5.3	2.7	3.7	3.0	4.7	7.0	2.3	6.0	7.0	6.7	3.0	3.7	3.0	4.0	4.3
A98-183	5.0	5.0	3.3	2.7	2.3	3.3	7.0	2.7	6.3	7.0	6.3	2.7	2.7	3.0	3.3	4.2
IB7-308	5.7	4.0	2.7	3.3	2.3	4.0	6.3	2.7	6.0	7.0	6.0	2.7	2.7	3.0	3.0	4.2
BAR PP 0566	5.0	6.0	2.3	2.7	2.3	3.3	6.0	4.0	6.3	8.0	8.0	2.0	3.3	3.0	4.0	4.2
A98-407	5.0	4.3	1.7	2.0	1.7	3.7	5.7	2.7	5.7	8.0	6.7	2.3	2.3	3.3	5.0	4.2
CVB-20631	5.0	4.7	1.3	3.3	1.7	3.3	5.0	2.0	5.7	7.0	7.0	1.7	3.7	2.3	3.3	3.8
LSD VALUE	0.6	1.4	1.7	2.2	3.3	1.7	1.1	2.0	1.3	1.1	1.3	1.2	1.4	1.5	1.6	2.4
C.V. (%)	7.1	15.3	27.4	25.1	44.9	19.8	10.3	34.8	11.8	8.9	11.5	14.3	13.8	28.5	19.0	24.5

1/ TO DETERMINE STATISTICAL DIFFERENCES AMONG ENTRIES, SUBTRACT ONE ENTRY'S MEAN FROM ANOTHER ENTRY'S MEAN.  
STATISTICAL DIFFERENCES OCCUR WHEN THIS VALUE IS LARGER THAN THE CORRESPONDING LSD VALUE (LSD 0.05).

2/ C.V. (COEFFICIENT OF VARIATION) INDICATES THE PERCENT VARIATION OF THE MEAN IN EACH COLUMN.

U.S. DEPARTMENT OF AGRICULTURE  
AGRICULTURAL MARKETING SERVICE

**EXHIBIT E**  
**STATEMENT OF THE BASIS OF OWNERSHIP**

1. NAME OF APPLICANT(S)	2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER	3. VARIETY NAME
J. R. Simplot Company <i>(07-01-1/2007)</i> 5300 West Riverbend Avenue Post Falls, ID 83854	J-1515	Perfection
	5. TELEPHONE (Include area code)	6. FAX (Include area code)
	(208) 773-7581	(208) 773-4846
	7. PVPO NUMBER <b># 2 0 0 3 0 0 0 0 8</b>	

8. Does the applicant own all rights to the variety? Mark an "X" in the appropriate block. If no, please explain.

YES

NO

9. Is the applicant (individual or company) a U.S. national or a U.S. based company? If no, give name of country.

YES

NO

10. Is the applicant the original owner?

YES

NO

If no, please answer one of the following:

a. If the original rights to variety were owned by individual(s), is (are) the original owner(s) a U.S. National(s)?

YES

NO

If no, give name of country

b. If the original rights to variety were owned by a company(ies), is (are) the original owner(s) a U.S. based company?

YES

NO

If no, give name of country

11. Additional explanation on ownership (Trace ownership from original breeder to current owner. Use the reverse for extra space if needed):

**PLEASE NOTE:**

Plant variety protection can only be afforded to the owners (not licensees) who meet the following criteria:

1. If the rights to the variety are owned by the original breeder, that person must be a U.S. national, national of a UPOV member country, or national of a country which affords similar protection to nationals of the U.S. for the same genus and species.
2. If the rights to the variety are owned by the company which employed the original breeder(s), the company must be U.S. based, owned by nationals of a UPOV member country, or owned by nationals of a country which affords similar protection to nationals of the U.S. for the same genus and species.
3. If the applicant is an owner who is not the original owner, both the original owner and the applicant must meet one of the above criteria.

The original breeder/owner may be the individual or company who directed the final breeding. See Section 41(a)(2) of the Plant Variety Protection Act for definitions.

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 0.1 hour per response, including the time for reviewing the instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

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